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The Impact of Stronger Shareholder Control on Bondholders

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Abstract

We study the impact of stronger shareholder control on bondholders. We find that the passage of shareholder-sponsored governance proposals causes a decline in CDS spreads, indicating a net positive effect on bondholders. Evidence suggests that the direct benefit of stronger shareholder control, through "management disciplining" channel, is larger than the combined adverse effects of directly escalating shareholder-bondholder conflict and indirectly exacerbating exposure to shareholder opportunism. Results are stronger for firms with existing high levels of shareholder-bondholder conflict and for proposals that mitigate managerial entrenchment without exacerbating risk-shifting. Finally, stronger shareholder control improves credit ratings and operating performance in the long-term.

JEL Codes: G14, G32, G34

Keywords: Corporate Governance, Debt, Agency Cost, Shareholder Meetings, Regression Discontinuity, Event Studies

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I. Introduction

What is the impact of stronger shareholder control on bondholders? Do bondholders benefit because stronger shareholders discipline management, or are they worse off because stronger shareholders pursue their own interests at the expense of bondholders? In this paper, we address these questions by studying the impact on the riskiness of debt of corporate governance changes that lead to stronger shareholder rights. Employing a regression discontinuity design, we find that increasing shareholder rights causes a decline in the riskiness of debt.

The Anglo-Saxon view of corporate governance is mainly defined in terms of improving and protecting shareholder control (Shleifer and Vishny (1997)). Thus, corporate governance policies are predominantly designed to advance and protect shareholders' interests; therefore, their impact on shareholders is expected to be positive. Evidence in the literature largely supports this prediction (Gompers, Ishii, and Metrick (2003); Cuñat, Gine and Guadalupe (2012)). However, the net impact of these policies on bondholders is the outcome of three opposing forces and is therefore complicated and unclear. In the Jensen and Meckling (1976) framework, bondholders face two conflicts: managerial entrenchment, defined as the conflict between management and both bondholders and shareholders, and the conflict between shareholders and bondholders. The first channel, "management disciplining," relates to the fact that if more shareholder control translates into more effective monitoring and disciplining of entrenched management, bondholders benefit. In contrast, the second channel, "wealth redistribution," captures the idea that shareholders' misuse of their control by undertaking riskier projects (risk shifting) would be detrimental to bondholders.

Moreover, the impact of managerial entrenchment on bondholders can in fact be even more complicated than described above. Chava, Kumar, and Warga (2010) argue that managerial entrenchment itself has both a direct and an indirect effect on bondholders' risk. As discussed above, on the one hand, entrenched managers can enrich themselves to the detriment of shareholders and bondholders, for example by "empire building" (Jensen and Meckling (1976); Shleifer and Vishny (1989)). On the other hand, due to shareholder-management conflict, an entrenched manager can sometimes act as a deterrent to shareholder opportunism (examples include large payouts and leverage-increasing takeovers), thereby benefitting bondholders. We call this third channel "opportunism resistance." It is well established in the literature that opportunistic behavior by shareholders adversely affects bondholders (Jensen and Meckling (1976); Myers (1977); Kim and McConnell (1977); Cook and Martin (1991); Warga and Welch (1993)). In other words, given the shareholder-management conflict on the one hand and the shareholder-bondholder conflict on the other, an intricate interplay arises between management, shareholders, and bondholders, which indicates that depending on the intensity of the existing shareholder-bondholder conflict, alleviating managerial entrenchment can both exacerbate and mitigate the risk to bondholders. Therefore, the impact on bondholders of stronger shareholder control depends on the relative strength of management disciplining, wealth redistribution, and opportunism resistance channels, and thus is much more complex and nuanced compared to its effect on shareholders. It follows that the net effect of these opposing forces on bondholders, and therefore on riskiness of debt, is *a priori* ambiguous and is ultimately an empirical question.

It is challenging to address this empirical question because a change in governance structure itself is usually endogenous. As pointed out by Hermalin and Weisbach (2003), it is very difficult to make a causal statement about the effect of corporate governance on any outcome in a firm unless one can identify an exogenous shift in corporate governance structure. Following Cuñat et al. (2012, hereafter CGG), we use a regression discontinuity design (RDD) that exploits the discontinuity in the probability of implementing shareholder-sponsored proposals. More specifically, we compare the effect of "close-call" proposals, shareholder-sponsored proposals that pass or fail by a small margin, on credit default swap (CDS) spreads. This method helps address endogeneity, facilitates identification, and establishes more confidence in a causal interpretation of our findings. We show that it is exactly these close-call proposals that have meaningful and relevant information content. In contrast, those proposals that fail or pass decisively elicit no market reaction since their outcomes are already predicted and reflected in the prices.

Using rating-adjusted CDS spread changes surrounding the voting date (following the methodology in Jorion and Zhang (2007); Finnerty, Miller, and Chen (2013); Andres, Betzer, and Doumet (2017)), we find that CDS spreads drop by up to 25 basis points (bps) on average after the passage of a corporate governance proposal. This is equivalent to an 18% drop in CDS spreads for an average firm in our sample. These findings indicate that stronger shareholder rights have a net positive impact on bondholders. Using the theoretical comparability between CDS spreads and bond-yield spreads (Duffie (1999)), we can think of a five-year CDS as a bond with a modified duration of approximately five years. It then follows that a 25 bps drop in the spreads indicates a 1.25% increase in bond value. This is equivalent to $129 million for an average firm in our sample. Further, we show that the reported net positive effect on bondholders is mainly driven by nontakover-related (non-G-Index-related)[1] proposals and those that dilute entrenchment without offsetting amplification of shareholder-bondholder conflicts.

Moreover, opportunism resistance channel implies that there is not a generic managerial entrenchment effect that always goes against bondholders' interest. Entrenchment leading to

[1] A takeover vulnerability index developed by Gompers et al. (2003) is widely used in corporate governance literature.

investment policies that raise default risk hurts bondholders, but entrenchment that dilutes shareholder opportunism against bondholder expropriation helps bondholders. Therefore, alleviating entrenchment may indirectly increase the riskiness of debt. Consistent with the prediction of this channel, we find that ameliorating managerial entrenchment increases the riskiness of debt for firms where entrenchment dilutes shareholder opportunism. Specifically, we find an offsetting effect for the drop in the CDS spreads of these firms that is consistent with Chava et al. (2010) and highlights the novel implication of the three-way interaction between shareholders, bondholders, and management.

While our baseline results indicate that the outcome of this interaction is on average a net benefit to bondholders, it would be insightful to compare the relative strength of the three channels. We do so by exploiting our sample's cross-sectional variation in degrees of managerial entrenchment and shareholder-bondholder conflict. First, we hypothesize a larger drop in the CDS spreads for the cross-section of firms with existing high levels of shareholder-bondholder conflict. For these firms, the marginal cost of stronger shareholder control is smaller than its marginal benefit. Since shareholder-bondholder conflict is already high for these firms, by further exacerbating this conflict, stronger shareholder control would have a smaller marginal negative impact on bondholders relative to its marginal positive effect. We find empirical support for this hypothesis. The drop in CDS spreads is larger for firms with speculative credit ratings, high CEO ownership, high leverage, and those that pay large dividends and have shrinking cash flow. [2]

Second, opportunism resistance hypothesis suggests that there are occasions where ameliorating entrenchment could have an indirect adverse impact on bondholders, offsetting its benefits. Consistent with this prediction, we find that the reported larger drop in CDS spreads of firms with high existing levels of shareholder-bondholder conflict is offset among a subset of this group of firms where entrenchment dilutes shareholder opportunism. For instance, we find that for high leverage firms, the 17 basis-point drop in CDS spread is cut by almost 8 basis points.

Third, we hypothesize that CDS spreads rise for firms with existing low levels of managerial entrenchment. For these firms, the marginal cost of increased shareholder control must be larger than its marginal benefit. Since for these firms managerial entrenchment is already low, its mitigation would have a small marginal positive impact on bondholders relative to the marginal negative impact that is caused by the increase in shareholder-bondholder conflict. Our empirical results do not support this hypothesis. We find no increase in CDS spreads for firms with low E-Index (Bebchuk, Cohen, and Ferrell (2009)), without CEO duality, with (relatively) shorter CEO tenure, nor for firms with low acquisition activities. In fact, although insignificant, almost all the coefficients have a negative sign, indicating a reduction in the spreads. This result indicates that the increase in the cost of stronger shareholder control to bondholders is not large enough to overshadow the benefits of lowering managerial entrenchment, even where those benefits are

[2] Some studies that use these variables to control for shareholder-bondholder conflict include Bhojraj and Sengupta (2003); Ashbaugh-Skaife, Collins, and LaFond (2006); Chava et al. (2010); Cremers, Nair, and Wei (2007). Chava, Livdan, and Purnanandam (2009) point out that "shareholder-friendly" managers can exacerbate shareholder-bondholder conflict.

expected to be minimal. Overall, this set of results seems to suggest that from the bondholders' perspective, the marginal negative direct effect of exacerbating the shareholder-bondholder conflict and the indirect adverse effect of ameliorating entrenchment that result from increased shareholder control are secondary to the gains from mitigating managerial entrenchment.

We also provide long-term evidence that supports our findings. We document a significant improvement in z-score and a decline in leverage ratio and cost of debt within one year of the election date. We also find upgrades in credit rating starting in two years. Examining how changes in governance structure affect risk shifting and asset substitution concerns, we show that over one to three years after the vote, cash flow growth volatility and stock price volatility decrease.

While much of the literature is focused on the impact of corporate governance on shareholders (McConnell and Servaes (1990); Yermack (1996); Karpoff, Malatesta, and Walkling (1996); Gompers et al. (2003)), our paper belongs to the more recent literature that evaluates corporate governance from the perspective of bondholders (e.g., Chava et al. (2009); Cremers et al. (2007); Ashbaugh-Skaife et al. (2006); Klock, Mansi, and Maxwell (2005); Bhojraj and Sengupta (2003)). Our paper contributes to the literature on several fronts. Our findings complement the CGG results, and together they provide a comprehensive picture of the causal effect of stronger shareholder control on the firm's external stakeholders. Results suggest that by mitigating managerial entrenchment, stronger shareholder control aligns the interests of shareholders and bondholders and therefore both parties benefit. These findings are also consistent with prior research on shareholder-bondholder conflict in other corporate events. Focusing on leveraged buyouts, Marais, Schipper, and Smith (1989) find no evidence of loss to bondholders. While this finding is contested by later studies (Asquith and Wizman (1990);

Warga and Welch (1993)), those studies find that losses to bondholders are relatively small. The evidence in Bhojraj and Sengupta (2003) is also consistent with the notion that the gains (lower bond yield and higher credit ratings) from mitigating managerial entrenchment are greater than the negative impact of wealth transfer. Furthermore, our paper provides a favorable view for the effect of shareholder activism on bondholders that is consistent with results in Sunder, Sunder, and Wongsunwai (2014) and adds to the evidence in Jiang, Li, and Shao (2010).

We differ from the existing literature in multiple dimensions. First, our main finding contrasts with previous studies. Whereas we find that stronger shareholder control has a net positive effect on bondholders, studies by Klock et al. (2005) and Chava et al. (2009) find the opposite. However, we provide evidence that the inconsistency of our results with those of prior studies is attributable to our identification strategy and not to the difference in our samples. We show that using our sample but following the methodology applied in those studies, one can obtain results that are similar to those in prior research. Second, using regression discontinuity design establishes more confidence in making a causal statement about the impact of governance on bondholders. Given the significance of this issue to academics, practitioners, and policy makers, finding and exploiting an exogenous change in governance structure to provide a causal estimate substantially improves our understanding of this relationship. Third, prior studies (Klock et al.(2005); Chava et al. (2009)) examine the governance impact predominantly through the prism of takeover vulnerability (G-Index). We, however, take a more comprehensive approach by looking at the effect of shareholder proposals that cover different dimensions of corporate governance. Thus, the scope of our approach provides a more complete picture of the effect of stronger shareholder control on bondholders and allows us to identify the link between bondholders' interest and governance structure. Fourth, prior studies use bond yield spreads or loan spreads to evaluate the impact on bondholders. Instead, we use CDS spreads. The superiority of CDS relative to bond spreads in reflecting the credit risk of a firm is well documented in the literature (Longstaff, Mithal, and Neis (2005); Blanco, Brennan, and Marsh (2005); Ericsson, Jacobs, and Oviedo (2009); Friewald, Wagner, and Zechner (2014)). Finally, we confirm the veracity of our results by conducting a series of robustness checks. We test the random assignment assumption of RDD and further confirm that our results are not driven by vote manipulation by the management. To address the concern for sample selection bias arising from using CDS firms, we compare our sample characteristics to those of the COMPUSTAT universe during the sample period. Similar to Subramanyam, Tang, and Wang (2014a), we also find that the firms with traded CDS contracts are larger, have stronger balance sheet and relatively high credit quality, indicating that it is unlikely that the benefit of stronger shareholder control on bondholders are overstated in our results. We further address this concern formally and confirm our earlier findings by estimating a Heckman's selection model in conjunction with RDD.

The remainder of this paper is organized as follows: in Section II we discuss the background and conceptual framework and develop hypotheses. Section III presents the empirical design, our identification strategy, and the data. Section IV presents our main results and analyzes the effect of different proposal types. In Section V, we provide more evidence from the cross-section, by dissecting the channels. In Section VI, we conduct a series of robustness checks. We discuss our long-term findings and contrast our results with previous findings in the literature in Section VII. Section VIII concludes.

II. Background and Conceptual Framework

A. The Three-Way Interaction

Corporations can be characterized by a three-way interaction among self-interested shareholders, managers, and bondholders. While the literature has largely focused on the bilateral shareholder-bondholder and shareholder-manager conflicts, analyzing the effect of stronger shareholder control on bondholders requires a close examination of this three-way interaction. Figure 1 is a graphical representation of this three-way interaction framework. This framework includes two direct channels with opposite effects of stronger shareholder control on bondholders, namely, wealth redistribution and management disciplining, and an indirect channel with a negative effect caused by ameliorating entrenchment.

[Insert Figure 1 here]

Wealth redistribution channel (capturing the conflict between shareholders and bondholder) is based on the fact that shareholders of levered companies have incentives for risk shifting (Jensen and Meckling (1976). In levered companies, equity is a call option on the corporate assets and its value increases in risk. The value of a risky bond is equal to the value of a portfolio of a risk-free but otherwise identical bond plus a short position in a put option written on firms' assets (Merton (1974)). By increasing asset volatility, risk shifting increases the value to shareholders (i.e., the value of the call option increases) but reduces the value to bondholders (i.e., the value of the shorted put option increases). Moreover, corporate law in the U.S. imposes no fiduciary duty on the directors and officers toward bondholders. This provides a legal motivation for expropriation of the bondholders to increase shareholder value. Similarly, Cremers et al. (2007) and Chava et al. (2009) argue that strong shareholder control implies better alignment of management with shareholders. These "shareholder-friendly" managers may raise asset substitution concerns for bondholders and intensify shareholder-bondholder conflict.

Therefore, this channel suggests that more shareholder rights are detrimental to bondholders and increase the riskiness of debt (Bhojraj and Sengupta (2003); Ashbaugh-Skaife et al. (2006); Warga and Welch (1993); Shleifer and Summers (1988); Klock et al. (2005); Parrino (1997); Maxwell and Rao (2003); Parrino and Weisbach (1999); Maxwell and Stephens (2003)). This discussion leads to our first hypothesis:

Hypothesis 1. Wealth Redistribution Effect: By escalating shareholder-bondholder conflict, stronger shareholder control increases the riskiness of debt.

Management disciplining channel (capturing the conflict between management and both shareholders and bondholders) is rooted in the separation between ownership and management that creates an incentive for management to act in its own self-interest and to deviate from shareholder value maximization (e.g., shirking, focusing on short-term returns, overcompensation, and empire building. See Jensen and Meckling (1976); DeAngelo and Rice (1983); Dechow and Sloan (1991); Murphy and Zimmerman (1993); Murphy (1985); Jensen (1986)). Thus, to the extent that increasing shareholder rights translates into a more effective disciplining of management (e.g., better monitoring), it prevents value destruction, reduces default risk, and is therefore beneficial to all stakeholders, including bondholders. This channel suggests that increasing shareholder rights is beneficial to bondholders and reduces the riskiness of debt (Sengupta (1998); Bhojraj and Sengupta(2003); Fields, Fraser, and Subrahmanyam (2012); Ashbaugh-Skaife et al. (2006); Carcello and Neal (2000); Anderson, Mansi, and Reeb (2004)).

Hypothesis 2. Management Disciplining Effect: By ameliorating managerial entrenchment, when entrenchment raises default risk, stronger shareholder control reduces the riskiness of debt.

It is imperative to include in the above discussion the indirect effect of shareholder-management conflict when examining the effect of management disciplining on bondholders. As argued by Chava et al. (2010), there is no generic managerial entrenchment effect that always goes against bondholders' interest. Entrenchment leading to investment policies that raise default risk hurts bondholders, but entrenchment that dilutes shareholder opportunism against bondholder expropriation helps bondholders. Entrenched managers are unlikely to pay out extraordinarily large dividends. To avoid market scrutiny, they rely on internal cash and other liquid assets to finance "empire building." Entrenched managers also generally resist leverage-increasing takeovers. While these takeovers are beneficial to shareholders, they are considered a risk factor to bondholders (Jensen and Meckling (1976); Myers (1977); Kim and McConnell (1977); Cook and Martin (1991); Warga and Welch (1993)). In these occasions, entrenched managers and bondholders are allies against opportunist shareholders. Therefore, contrary to shareholders who unambiguously benefit from mitigating managerial entrenchment, disciplining management has an indirect adverse impact on bondholders in addition to its direct positive effect. Therefore, as Figure1 illustrates, due to the three-way interaction, the impact on bondholders of ameliorating managerial entrenchment is much more complex and nuanced compared to its effect on shareholders.

As highlighted by Chava et al. (2010), two prominent examples where entrenchment resists shareholder opportunism are mitigations of bondholder risk arising from large dividend payout and leverage-increasing takeovers. They show that the likelihood of including covenants restricting dividend payout or takeover (shareholder opportunism-related covenants) is positively related to factors that weaken managerial entrenchment.[3] The three-way interaction here implies that the interests of management are aligned with those of bondholders when an entrenched management dilutes shareholder opportunism. In bondholders' view, it is precisely in these firms that stronger shareholder control is tantamount to too much shareholder power, making expropriation of bondholders more likely. Therefore, we expect a marginal rise in the riskiness of debt for these firms. This discussion leads to our third hypothesis.

Hypothesis 3. Opportunism Resistance: By ameliorating managerial entrenchment, when entrenchment dilutes shareholder opportunism, stronger shareholder control indirectly increases the riskiness of debt.

Theoretically all three channels coexist and are not mutually exclusive. Thus, the net effect, whether positive or negative, of stronger shareholder control on bondholders is *a priori* unclear and requires an empirical resolution. Accordingly, there are two competing predictions for the overall net effect. An increase in the riskiness of debt is consistent with the impact of the wealth redistribution channel as well as the opportunism resistance channel, whereas a decrease in riskiness of debt is in line with the effect of the management disciplining channel, suggesting that its effect is larger than the combined effects of wealth redistribution and opportunism resistance channels.

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[3] Specifically, Chava et al. (2010) conclude that "*[the] demand for dividend covenants is significantly and positively associated with shareholder power, and bondholders view managerial entrenchment as ameliorating shareholder agency risk for large dividend payout*" (p.1135) and that "*[for] bondholders, the primary agency risk during takeovers and financial distress situations is from shareholder opportunism…*" (p.1138).

B. Dissecting the Channels

Given that the simultaneous positive and negative effects of stronger shareholder control drive the complexity of their impact on bondholders, it is insightful to examine the relative importance of these opposing effects of increased shareholder control in driving the outcome of the three-way interaction. Particularly, we ask whether the observed overall effect is the result of one channel being just marginally stronger, or is there a dominating channel? We address this issue by using our conceptual framework and exploiting our sample's cross-sectional variation in managerial entrenchment and shareholder-bondholder conflict measures to develop refutable hypotheses for subsets of our sample. Our framework allows us to focus on two extreme cases, where we can mute the impact of one channel and develop hypotheses about the effect of the others.

In one extreme case, we mute the negative impact of the wealth redistribution channel, and we focus on firms where our framework suggests that the positive effect of more shareholder control on bondholders is stronger. Specifically, we focus on firms with existing high levels of shareholder-bondholder conflict. Given that for these firms the shareholder-bondholder conflict is already high, further escalation of this conflict due to increased shareholder control would not make the matter that much worse. Therefore, the marginal benefit of stronger shareholder control, through the management disciplining channel, is larger than its marginal cost, and thus the reduction in the riskiness of debt should be larger for these firms.[4] Moreover, as discussed

[4] We must note that this argument implicitly assumes that the marginal bondholder wealth expropriation effects of stronger shareholder control fall as the level of shareholder-bondholder conflict rises. In Section IX.A in the Internet Appendix, we justify this assumption using the Merton (1974) model of credit risk and provide the results of a simulation to further verify this assumption.

earlier in the opportunism resistance hypothesis, the management disciplining effect is not universal and there are occasions where ameliorating entrenchment could have an adverse impact on bondholders. Therefore, in those occasions we expect to observe an offsetting effect. Specifically, we hypothesize the following.

Hypothesis 4. Stronger shareholder control (a) reduces the riskiness of debt for firms that have high existing levels of shareholder-bondholder conflict, and (b) this risk reduction is attenuated for firms where entrenchment dilutes shareholder opportunism.

In the other extreme case, we mute the effects of mitigating managerial entrenchment, i.e. disciplining management and opportunism resistance. We do this by focusing on firms with existing low levels of managerial entrenchment. It follows that mitigating managerial entrenchment for firms in which entrenchment is not a concern should have limited effects (direct and indirect), if any. For these firms, the combined marginal cost of escalating shareholder-bondholder conflict and shareholder opportunism is larger than the marginal benefit of ameliorating weak entrenchment. Therefore, in this case, stronger shareholder control increases the riskiness of debt.

Hypothesis 5. Stronger shareholder control increases the riskiness of debt for firms that have low existing levels of managerial entrenchment.

III. Empirical Design and Data

Our empirical design closely follows CGG's, which follows the methodology developed by Cellini, Ferreira, and Rothstein (2010) to adapt a regression discontinuity design to an event study. In both studies, the identification strategy is based on the discontinuity in voting outcome (a corporate governance proposal in the former and issuing a bond targeted at a school facility investment in the latter) around the majority threshold, 50%. The outcome of the votes on shareholder proposals is nonbinding but, as shown in Ertimur, Ferri, and Stubben (2010), 31.1% of shareholder proposals that pass are implemented, compared to only 3.2% of those not approved. Thus, these close-call proposals can be viewed as exogenous shifts in the corporate governance structure and can provide a unique setup that is very close to a randomized experiment that helps address endogeneity and establishes greater confidence in the causal interpretation of the effect of passing a governance proposal on the riskiness of debt, measured by adjusted CDS spreads.[5]

Our dataset is an intersection of multiple data sources. We use governance-related shareholder proposals gathered by Institutional Shareholder Services Inc. (ISS), formerly known as RiskMetrics, from 1997 to 2011. ISS collects this data from the proxy statements of S&P 1,500 firms as well as approximately 500 additional widely held companies. We require that none of the company names, voting dates, or vote results be missing. This yields a sample of 5,082 proposals from 3,147 firm-meetings of 1,462 companies. We match the voting sample with Markit CDS Pricing to get the CDS spreads. Our daily CDS spread is from January 2001 to December 2011. The most common CDS on North American entities are for senior unsecured debt with five-year maturity and following so-called modified restructuring (frequently referred to as Mod R). We could match the CDS spreads for 2,718 proposals that were put to a vote at 1,496 firm-meetings for 409 companies. Finally, we match the resulting sample to CRSP and COMPUSTAT to add share price and financial information.

[5] Please see Sections IX.B and IX.C in the Internet Appendix for more details about our regression discontinuity design. Specifically, we provide an overview of RDD (Section IX.B) and conduct some validity tests such as continuity in vote distribution (Section IX.C.1) and preexisting differences (Section IX.C.2 and Table A.6).

We use the CDS to measure the riskiness of debt. Given the theoretical equivalence and economic comparability of CDS spreads and bond yield spreads as shown by Duffie (1999), one can argue that yield spread can be used – as it has been in the literature – to infer changes in the riskiness of debt. However, using CDS data has a number of advantages over using bond yield spreads. It is a well-established fact that bond yield spreads are at best a very noisy proxy for default probabilities since they include several nondefault premiums, namely liquidity and tax differential premiums.[6] Thus, to the extent that CDS spreads proxy for default probabilities (Friewald et al. (2014)), their movements provide reliable and timely updates as the respective movements in the riskiness of debt of the corresponding reference entities. Moreover, following CGG, we classify shareholder proposals into six groups: auditors, board structure, compensation, antitakeover proposals (G-Index), voting, and other. Table A.1 in the Internet appendix summarizes these proposals.

The number of observations increases over time due to the increase in coverage of both ISS and Markit CDS Pricing. The average vote outcome is 37.2%; out of 2,718 proposals in our sample, 28.5% passed. G-Index-related proposals constitute about 35% of the sample with the highest approval rate (more than half approved). Except for proposals in the voting category, other proposals have only very weak support among shareholders. Table A.2 in the Appendix provides detailed information on the voting percentages, average vote outcome, and number of votes in a window around the pass-threshold (50%) for the six main categories and all the ISS subcategories in our sample.

[6] In Section IX.D in the Internet Appendix, based on prior research, we outline different reasons as to why CDS spread is superior to bond yield spread in reflecting a firm's credit risk.

Table 1 displays the characteristics of the firms in our sample. The average CDS spread is 136.16 bps, which is low compared to 209 bps, the average spread of all dollar-denominated CDSs on senior unsecured debt with five-year maturity and Mod R restructuring clauses from 2001 to 2011. This is consistent with the average credit rating in our sample, BBB. Following the literature on CDS event studies (Jorion and Zhang (2007); Finnerty et al. (2013); Andres et al. (2017)), we use a rating-adjusted method to calculate an adjusted CDS spread change. A rating-adjusted CDS spread change (ASC_{it}) is:

(1) $$ASC_{it} = \Delta CDS_{it} - \Delta Market_{it} = (CDS_{it} - CDS_{it-1}) - (Market_{it} - Market_{it-1})$$

where $Market_{it}$ is the average of all dollar-denominated CDSs on senior unsecured debt with five-year maturity for entities with the same credit rating as a firm. Cumulative Adjusted CDS Spread Change is the sum of the ASC_{it} for a firm on voting day and one day after that. Average Cumulative Adjusted CDS Spread Change (0, 1) is 0.2 bps with standard deviation of 18.6 bps and is statistically insignificant.

[Insert Table 1 here]

IV. Main Results

As we discuss in Section II, stronger shareholder control affects bondholders through three different channels that have opposite effects. Thus, the net effect is *ex ante* ambiguous and requires an empirical resolution. Employing regression discontinuity design, in this section we provide that empirical resolution and measure the overall net effect of stronger shareholder control on bondholders. The reported effect in this section can, therefore, be thought of as the *sum* of the positive and negative effects of management disciplining, wealth redistribution, and opportunism resistance channels.

A. Baseline Results

Table 2 reports the difference in absolute cumulative adjusted CDS spreads of companies for which corporate governance proposals are narrowly passed and narrowly rejected from the election date to one day after.[7] Column 1 shows that this difference is highly insignificant (with a *p*-value of 0.92) for the whole sample. When the market expects a governance proposal to pass (or fail) by a large margin, there is little uncertainty left for the day of voting since CDS spreads already reflect that expectation, resulting in no abnormal return on the election date. In Column 2, the sample is restricted to proposals that are passed with fewer than 60% of votes or rejected with more than 40% of votes (within 10% of election threshold of 50%). As a result, the sample size drops from 2,718 to 776, reflecting the fact that the majority (71.4%) of proposals are passed (or rejected) by a large margin. Although still insignificant, the difference starts to widen to -2.049 bps. Even though further restricting the sample to proposals with votes within 5% of the election threshold (Column 3) further cuts the sample size to almost half of that in Column 2 (or 15% of the whole sample in Column 1), it nevertheless results in a larger and statistically significant difference in the adjusted CDS spread. Passing a corporate governance proposal here lowers the adjusted CDS spread by 4.040 bps (significant at the 1% level). This difference becomes larger when we narrow the interval even further around the election threshold to 2% and 1% (Columns 4 and 5), thus shrinking the sample size to only 170 and 105, respectively.

[7] Given that we suspect a slower market reaction due to lower liquidity of the CDS market compared to the equity market, unlike the CGG one-day window, we choose a two-day window. As dynamic specifications confirm our conjecture in Table 3, full market reaction takes longer than one day for the CDS spread, whereas the same table in CGG shows that the equity market reaction mostly happens in one day.

Here, we find a drop of 4.060 bps and 5.169 bps, respectively, both statistically significant at 2% and 9%, respectively.

[Insert Table 2 here]

Finally, opening the window to the entire sample but controlling for distance to the threshold – by two separate polynomials of order six in the vote on each side of the threshold as described in Equation (A2) in the Appendix – in Column 6 gives a similar result. There is a highly significant drop (p-value < 0.01) in the adjusted CDS spread by 6.125 bps as a result of passage of a corporate governance proposal. For the average (median) firm in our sample, this is equivalent to a 4.5% (10%) drop. Using the theoretical comparability between CDS spreads and bond yield spreads (Duffie (1999)), a 6 bps drop in the spreads indicates a 0.3% increase in bond value that is equivalent to $31 million for an average firm in our sample. However, as noted by CGG, this estimate only reflects a change in the expectation of the proposal implementation as well as a change in the expectation of submission and implementation of future proposals. Ertimur et al. (2010) find that on average the probability that a passed proposal will be implemented is 31.1%. For proposals closer to the threshold, this probability increases by 20.7%, from 3.2% for failed proposals to 23.9% for proposals that pass. For a subset of G-related proposals, CGG estimate a discrete change in the implementation probability of 30.1% within two years, and within four years the probability is 50%. Given the estimated implementation probabilities by CGG and Ertimur et al. (2010),[8] we estimate that the passage of a proposal reduces the risk to bondholders by between 12 and 25 bps, which indicates, respectively, an increase of 0.6% to 1.25% in debt value that is equivalent to about $62 to $129 million for an average firm in our sample.

[8] See Section IV.A.3 in CGG for more detail.

B. Dynamic Model with Vote Aggregation

All 2,718 proposals in the sample were put to vote on 1,492 firm-meeting dates, indicating the fact that on some election dates more than one proposal was put to vote. Although the majority of the proposals were put to vote on meeting dates when there was only a single proposal on which to vote, there were also meeting dates when several proposals were put to vote. Table A.3 in the Internet appendix summarizes the distribution of the number of proposals per meeting and their voting outcome.

This table shows that the number of proposals per meeting ranges from 1 to 9. One may expect a stronger impact of votes on the CDS spread as the number of passed proposals (or intensity of treatment) increases. Therefore, because of both the potential persistence of the impact and the possibility of the intensity of treatment effect, we need to go beyond the simple demonstration of data in Table 2 by (a) investigating the dynamics of this impact using a distributed lagged model over the days following an election date (as in Equation (A4)) to capture the potential persistence, and (b) aggregating the number of proposals that passed per firm-meeting and their corresponding vote shares (as in Equation (A5)) to incorporate the intensity of treatment. This task calls for combining Equations (A4) and (A5), resulting in Equation (A6), for which the estimation results are shown in Table 3.

[Insert Table 3 here]

Results in Table 3 illustrate the effect of passing a proposal on the adjusted CDS spread on meeting date t (θ^{τ} in Equation (A6)); one day after the election date, or $t + 1$; and the cumulative effect from $t + 2$ to $t + 7$. What distinguishes the different columns in Table 3 is the set of fixed effect terms used in model specification. Given that here the window around an election threshold is open to include virtually the whole sample, as described earlier, the information contained in distance to threshold for votes on each meeting date is incorporated using separate polynomials in vote shares on each side of the threshold. The coefficients for each polynomial are allowed to vary for each of the lagged periods.

Overall, we find that the net effect of passing a corporate governance proposal on the adjusted CDS spread is almost equally distributed over the first two days of an election. For example, in Column 3, which has the richest set of fixed effects, the CDS spreads drop by about 2 bps on the day of an election. In all specifications, we can see that the declining pattern in CDS spreads is persistent.

In sum, using a regression discontinuity design, we document the effect of passing a corporate governance proposal on the riskiness of debt that can more reliably be viewed as causal. This significant effect ranges between a 2.86 bps and a 6.12 bps drop in adjusted CDS spreads, depending on the model specification. Our results support the notion that strong shareholder control has a net positive impact on bondholders.

C. Evidence from Grouping the Proposals

So far, our empirical evidence suggests that stronger shareholder control has a net positive impact on bondholders. CGG find that the positive effect of passing governance proposals on shareholders is mostly driven by takeover related proposals. Can this result be extended to bondholders? We provide empirical evidence that the opposite is true for bondholders: the drop in the riskiness of debt is mainly driven by the passage of nontakover-related proposals.

1. Takeover versus Nontakover Proposals

Theory makes opposing predictions about the impact of takeover-related proposals on bondholders. On the one hand, according to Jensen (1986), relaxing takeover restrictions strengthens the market for corporate control, which alleviates managerial entrenchment and reduces the riskiness of debt (decline in CDS spreads). On the other hand, studies by Kim and

McConnell (1977), Cook and Martin (1991), Warga and Welch (1993), and Ghosh and Jain (2000) show that the increased likelihood of a takeover together with the increased likelihood of higher leverage due to the takeover increases the riskiness of debt (rise in CDS spreads). Thus, takeover-related proposals affect managerial entrenchment and shareholder-bondholder conflict in opposite directions, indicating that the net effect of the takeover-related proposals on CDS spreads is *a priori* ambiguous.

Further, it may seem that the passage of nontakeover-related proposals improves monitoring of management and thereby mitigates entrenchment that benefits both shareholders and bondholders. As a result, unlike takeover-related proposals, the passage of nontakeover-proposals should unambiguously lower the riskiness of debt. This view assumes that the passage of nontakeover proposals affects the riskiness of debt only through management disciplining. However, as we discuss in detail in the next section, Table A.2 shows that while there are nontakeover proposals, such as audit and board related, that affect riskiness of debt primarily through the management disciplining channel, there are other nontakeover proposals, such as compensation related, that impact riskiness of debt through both management disciplining and wealth redistribution channels. [9] All in all, it appears that there is no clear prediction by theory on the direction that the passage of takeover (G-Index-related) and nontakeover related (non-G-Index related) proposals affect bondholders.

Table 4 illustrates the estimation results for a modified version of Equation (A6) where we estimate separate coefficients for θs, and γs for G-Index (takeover-related) and non-G-Index

[9] In addition, as discussed earlier, Chava, Kumar, and Warga (2010) argue that due to the three-way interaction between management, shareholders, and bondholders, mitigating managerial entrenchment could also have a negative indirect effect on bondholders.

(nontakover related) proposals. The upper panel of this table reports the CDS spread reaction to passing G-Index-related proposals, and the lower panel shows the same effect for non-G-Index proposals. In all three columns in Table 4 we can see that while CDS spreads decrease in response to the passing of both G-Index- and non-G-Index-related proposals, the drop is stronger – both statistically and economically – for non-G-Index-related proposals. In Column 3, for example, in a three-day window from t to $t + 2$, the CDS spread falls by only 2.6 for G-Index proposals (insignificant), whereas it drops by more than 9 bps for non-G-Index proposals.

[Insert Table 4 here]

As tabulated in Table A.2, the list of non-G-Index-related proposals with greater numbers of votes around the majority threshold that are driving our results includes compensation-related (advisory vote on compensation and expense stock options), voting-related (majority vote to elect directors), board-related (separate chairman/CEO), and audit-related (limiting the consulting role of auditors) proposals. In contrast, CGG's result is driven by G-Index proposals: delay-related (repeal classified board), voting-related (cumulative voting and eliminate supermajority), protection-related (vote on future golden parachutes), and other (redeem or vote on poison pill) proposals. Combined, these results show that while both shareholders and bondholders benefit from stronger shareholder rights, the benefit is channeled through improvement in external governance (takeover vulnerability) for shareholders, but through stronger internal governance (board independence, management compensation package, auditing, and voting rights) for bondholders. This result perhaps can be explained by the fact that unlike shareholders, bondholders have little upside potential but considerable downside risk. Therefore, nontakover proposals that limit downside risk by mitigating conflicts with management are more relevant to bondholders, whereas takeover related proposals that increase the exposure to mergers and acquisitions (M&A) and lead to larger expected gains (e.g., larger purchase premiums) matter more to shareholders.[10]

The results in this section are in line with previous findings in the literature. Results in Sengupta (1998); Bhojraj and Sengupta (2003); Anderson et al. (2004); Ashbaugh-Skaife et al. (2006); Fields et al. (2012); and Sunder et al. (2014) all indicate that changes in governance mechanisms that improve monitoring limit management from acting in its own self-interest and positively affect bondholders. According to this literature, a sound governance mechanism that limits management's self-dealing behavior with better monitoring ─by improving board independence, management compensation packages, independent audits, and voting rights─ reduces information asymmetry between the firm and external stakeholders and thus benefits bondholders.

2. Compensation versus Audit Board Proposals

In the previous section, we provide evidence that the net positive effect on bondholders of stronger shareholder control is mainly driven by nontakeover- (non-G-Index) related proposals. However, there are nontakeover proposals that affect the riskiness of debt through management disciplining channel as well as wealth redistribution. In this subsection, we examine the effect of these nontakeover proposals. Specifically, we categorize these proposals into two groups: those that affect the riskiness of debt only through management disciplining channel and those that affect the riskiness of debt through both management disciplining and wealth redistribution

[10]We thank Vicente Cuñat for pointing this out.

channels.[11] Given that our evidence shows that the net benefit to bondholders from stronger shareholder control is mainly driven by nontakeover-related proposals, we expect that the CDS spreads should decline for both groups; however, the drop should be larger for the proposal group that affects riskiness of debt only through the management disciplining channel. The net positive effect would be smaller for the other group because the negative effect of wealth redistribution channel offsets the positive effect of the management disciplining channel.

We look for non-G-related proposals that can be argued to affect bondholders through both management disciplining and wealth redistribution channels. One may argue that compensation-related proposals (such as those that link management compensation to equity value or performance) can exacerbate the conflict between shareholders and bondholders by aligning management to shareholders. According to Jensen and Meckling (1976) and Jensen and Murphy (1990), equity-based/linked compensation packages provide risk-shifting incentives for management. Bebchuk and Spamann (2010) attribute bankers' excessive risk-taking behavior to high equity-linked executive compensation packages. Similarly, Chava et al. (2009) and Cremers et al. (2007) argue that shareholder friendly managers (CEOs with large equity-linked compensation packages) can escalate the shareholder-bondholder conflict. Fortin et al. (2014) also show that bondholders are adversely affected by incentive alignment through compensation-related proposals. Therefore, while compensation-related proposals align shareholders and management, they can have an adverse effect on bondholders by increasing the conflict between shareholders and bondholders. Thus, we put these proposals in one group. In contrast, audit-

[11] Due to the nature of these proposals, there is no proposal that affects only shareholder-bondholder conflict. In addition, data limitation does not allow us to split our sample based on proposal types. Therefore, we split them into the two aforementioned broader groups.

related and board-related proposals mitigate managerial entrenchment and appear to have no significant impact on shareholder-bondholder conflict.[12] We combine these proposals in the other group that affects the riskiness of debt only through the management disciplining channel. Results are reported in Table 5.

[Insert Table 5 here]

In all specifications, results show that CDS spreads significantly drop for both groups. However, consistent with our expectation, results are stronger for audit-board-related proposals. Subsequent to the passage of audit-board-related proposals, the drop in the CDS spreads continues to be significant for three days and amounts to about 21 bps. Following the passage of compensation-related proposals, the CDS spreads decline on the day and the day after the election for a total of about 5 bps. After that, the change becomes statistically insignificant.

V. Evidence from the Cross-Section

In the previous sections, we provide empirical evidence that improvement in corporate governance has a net positive effect on bondholders. Given that the simultaneous positive and negative sides of stronger shareholder control drive the complexity of its effect on bondholders, in this section we compare the relative strength of the channels through which increased shareholder control affects the riskiness of debt. Is the observed overall positive effect reported in the previous sections, the result of management disciplining channel being just marginally stronger than wealth redistribution and tipping the overall effect in its direction or is it the dominating channel? Are there occasions where ameliorating entrenchment adversely affect bondholders as predicted by opportunism resistance hypothesis?

[12] Voting-related proposals also fall around the threshold, but they are excluded from our analysis because it is not clear whether they impact managerial entrenchment or shareholder-bondholder conflict.

A. Indirect Effect of Entrenchment

In this section we test the opportunism resistance hypothesis. As discussed in Section II, according to the Chava et al. (2010) insight, the likelihood of including dividend payout and takeover covenants is positively related to factors that weaken managerial entrenchment. We collect the covenant information from the Fixed Income Securities Database (FISD) and Loan Pricing Corporation's DealScan. FISD and DealScan contain information on more than 50 covenants. We construct a Dividend-Takeover index (DT) as the sum of indicators for the existence of these two covenants.[13] Higher values of the index are associated with more exposure to shareholder opportunism.

We estimate an augmented version of our dynamic model (Equation A6) by including interaction terms between DT and the pass dummy. As discussed before, opportunism resistance hypothesis suggests a marginal rise in the CDS spreads; thus, we expect positive coefficients on the interaction terms. Results are reported in Table 6. One day following the passage of a proposal, the interaction term is positive and statistically significant (coefficient = 2.59; *p*-value = 0.1), indicating a marginal rise in the CDS spreads. Focusing on the third column that has the richest set of fixed effects, an increase in DT from its lowest value of zero to its maximum of two raises the CDS spreads by about 5 basis points, offsetting the 8 basis point cumulative drop in the CDS spreads during the first two days following the passage of a proposal. Moreover, we see that all the other interaction terms in the other models (with one exception in Model 1) are also positive, though statistically insignificant. Overall, this result is consistent with the cross-sectional prediction of opportunism resistance hypothesis that ameliorating entrenchment may

[13] Covenant data collection, aggregation, and the process of constructing the DT index are detailed in Section IX.F in the Internet Appendix.

adversely affect bondholders on some occasions. It also adds to the evidence in Chava et al. (2010) and highlights the novel and sometimes counterintuitive implications of the three-way interaction between shareholders, bondholders, and management.

[Insert Table 6 here]

B. High-Conflict Firms: Direct Effect of Entrenchment

Muting the negative impact of wealth redistribution channel, we test Hypothesis 4 in this section. We use prior research and theoretical guidelines for choosing variables as proxies for the level of shareholder-bondholder conflict. We posit that speculative credit ratings, high CEO ownership, high leverage, large dividend payout, and shrinking cash flows are characteristics of firms with existing high levels of shareholder-bondholder conflict.

1. Credit Rating

Firms with speculative ratings are more prone to risk-shifting concerns. As discussed earlier, Hypothesis 4 predicts that the drop in CDS spreads is larger for firms with high existing levels of shareholder-bondholder conflict. Prior research also shows that improvement in governance structure is correlated with higher credit rating and lower yields (Ashbaugh-Skaife et al. (2006); Bhojraj and Sengupta (2003)).

We collect credit rating data from COMPUSTAT (S&P Domestic Long-Term Issuer Credit Rating) and split the sample into investment grade (BBB and above) and speculative issues (below BBB) and re-estimate a version of Equation (A6) for each subsample with firm fixed effects. The two columns associated with credit rating in Panel A of Table 7 report the results. We see that passing a corporate governance proposal has a negative but insignificant effect on the CDS spread for investment-grade firms, whereas it leads to a drop in CDS spread for firms with speculative ratings that are both statistically and economically significant. The CDS spread drops by 5.21 bps on the voting day, 6.14 bps a day later, and by 8.04 bps two days after the voting day − a total drop of nearly 19 bps that is statistically significant at 1% (rejecting the null hypothesis that the total drop over the three days following the vote is zero).

[Insert Table 7 here]

2. CEO Ownership

Based on Jensen and Meckling (1976), the conventional view in corporate finance is that by aligning the interest of management to that of shareholders, greater CEO ownership mitigates managerial entrenchment; however, it can also elevate wealth transfer concerns for bondholders. Similarly, Cremers et al. (2007) and Chava et al. (2009) point out that managers with large stock ownership can exacerbate shareholder-bondholder conflict. Thus, such CEOs can be characterized as shareholder friendly. Therefore, we argue that higher CEO ownership can intensify the shareholder-bondholder conflict. Hypothesis 4 would then suggest that the drop in CDS spreads is larger for firms with high CEO ownership.

We collect the CEO ownership data from Executive Comp and rank the sample based on CEO ownership, defined as the percentage of company shares owned by the CEO. The two columns associated with CEO ownership in Panel A of Table 7 compare the estimation results for companies with low CEO ownership (bottom quartile) and for those with high CEO ownership (top quartile). Results show that passing a corporate governance proposal in companies with high CEO ownership lowers the adjusted CDS spread by 4.28 bps on the voting day, 3.97 bps a day after, 5.02 bps two days after, and 11.94 bps three days after the voting day − a total drop of 25.2 bps, which is significant at 3%. (This rejects the null hypothesis that the total drop over the three days following the vote is zero.) In contrast, for companies with low CEO ownership, the change in adjusted CDS spread is insignificant.

3. Leverage

The incentive to expropriate wealth from bondholders to increase the value to shareholders increases with leverage. Therefore, the conflict between shareholders and bondholders is high for firms with high leverage (Jensen and Meckling (1976)). Hypothesis 4 suggests that for these firms the drop in CDS spreads is expected to be larger.

The two columns associated with leverage in Panel A of Table 7 report the results for firms in the bottom and the top quartiles of leverage. We find that the drop in CDS spreads after the passage of a proposal is much more pronounced for high-leverage firms. For these firms, the total drop in CDS spreads over three days after voting is about 34 bps (statistically significant at 2% and therefore rejects the null hypothesis that the total drop over the three days following the vote is zero) whereas the drop is insignificant for low-levered firms.

4. Dividend and Cash Flow Growth

Management of a firm's internal resources is a major source of conflict between different stakeholders of a firm (Jensen and Meckling (1976); Jensen (1986)). To avoid market exposure, management may allocate these resources to finance empire building or self-dealing, which would be detrimental to both shareholders and bondholders. Management also has an incentive to expropriate wealth from bondholders to shareholders (Merton (1974); Jensen and Meckling (1976); Ashbaugh-Skaife et al. (2006)). Paying large dividends to shareholders is one mechanism to expropriate wealth from bondholder to shareholders.[14] Sufficiently large dividends can significantly increase the default risk and are usually a concern to bondholders (Chava et al. (2010)). Therefore, the conflict between shareholders and bondholders is more pronounced for

[14] Hu and Kumar (2004) show that managers may pay high dividends to reduce shareholders' motive for the termination of the manager's employment.

firms that pay high dividends. Similarly, declining cash flows can also increase the firm's default risk; as a firm's default risk increases, so does the conflict between shareholders and bondholders. Hypothesis 4 suggests that for both of these firms the drop in CDS spread is larger.

In Panel A of Table 7, the pairs of columns associated with dividend and cash flow (CF) growth report the results. Dividends and CF growth are calculated using a rolling three-year average. The columns associated with dividends compare the top and bottom quartiles of dividends. For CF growth, results compare the CDS reaction of firms with positive cash flow growth (expanding CF) with firms with negative growth (shrinking CF). Consistent with Hypothesis 4, results show that the drop in CDS spreads is much more pronounced for high dividend-paying firms and for firms with negative CF growth. Subsequent to the passage of a proposal, CDS spreads drop by 7.5 bps (5.2 bps) on the day of the vote for high dividend (shrinking cash flow) companies. In the four days following the vote, CDS spreads drop by a total of 21.86 bps (20.87 bps) for high dividend (shrinking cash flow) firms (These estimates are statistically significant at 1% and reject the null hypothesis that the total drop over the three days following the vote is zero.) In contrast, CDS spread drop is insignificant for low dividend-paying firms and for firms with expanding cash flows (positive cash flow growth).

C. High-Conflict Firms: Indirect Effect of Entrenchment

In the previous section, we provided evidence consistent with the first part of Hypothesis 4, that stronger shareholder control leads to a larger drop in the CDS spreads for firms with high existing levels of shareholder-bondholder control. In this section, we examine the second part of Hypothesis 4, that the reduction in the CDS spreads is not universal and show that ameliorating entrenchment can increase CDS spreads through its indirect negative effect.

We augment our analysis in the previous section by including an interaction term between the DT and the pass dummy. The second part of Hypothesis 4 predicts positive coefficients on the interaction terms. Results are reported in Panel B of Table 7. We can see that the main result of Panel A is robust to inclusion of the interaction term. Consistent with Panel A, the drop in CDS spreads is larger for firms with high existing levels of shareholder-bondholder conflicts, e.g. firms with low credit rating, high CEO ownership, high leverage, large dividend payout, and shrinking cash flows. Moreover, we find evidence consistent with the second part of Hypothesis 4. Whenever statistically significant, the interaction terms are positive and belong to the high shareholder-bondholder conflict categories. For example, the result for the high CEO ownership category shows that the drop in the CDS spreads of these firms are offset by about 2 basis points in two days following the passage of the proposals, 7 basis points in three days, and 6 basis points in four days. To summarize, the cumulative 42 basis point drop in the CDS spreads of these firms during the four days following the passage of the proposals ($t + 1$ to $t + 4$) is offset by about 15 basis points. That means for a firm with high CEO ownership that does not use any shareholder-opportunism related covenant, the drop in its CDS spread is about 15 basis points larger compared to a firm with one such covenant. Except for the low credit rating category, we find similar results (but with varying magnitude and statistical significance) for other categories. For the high leverage category, the 17 basis point drop in CDS spread in day four is cut almost by half if a shareholder-opportunism related covenant is used. During the first four days following the passage of proposals (t to $t + 3$), the decline in CDS spreads of firms with shrinking cash flows that have one shareholder-opportunism related covenant is 11 basis points smaller than that of a firm without such covenants, for which the drop is about 35 basis points. A15 basis point drop in CDS spreads of high dividend paying firms in the first two days following the passage of the proposal (t to $t + 1$) is offset by 1 basis point if a shareholder-opportunism related covenant is used.

Overall, these results show that while stronger shareholder control lowers the overall risk to bondholders due to its disciplining effect, this reduction in risk is partially offset in firms where entrenchment dilutes shareholder opportunism. Moreover, the fact that the coefficients on the interaction terms are smaller than those of the pass dummies suggests that the indirect adverse effect of ameliorating entrenchment on bondholders is secondary to its direct positive effect. The result of this section is consistent with the indirect adverse effect of ameliorating managerial entrenchment on bondholders. Together, the results of Table 6 and Panel B of Table 7 verify the validity of opportunism resistance channel and its cross-sectional implication.

D. Low Managerial Entrenchment

In this section, we examine the other extreme case, where the negative effect of stronger shareholder control on bondholders is expected to be stronger. Specifically, in this section we test Hypothesis 5. We focus on firms with low existing level of managerial entrenchment. To measure the magnitude of managerial entrenchment we use E-Index, CEO duality, length of CEO tenure, and acquisitions.

1. E-Index

E-Index, or entrenchment index, developed by Bebchuk et al. (2009), uses staggered board, limits to shareholder bylaw amendments, poison pills, golden parachutes, and supermajority requirements for mergers and charter amendments to measure entrenchment. A large E-Index implies a high level of managerial entrenchment. Using the median of E-Index[15] in our sample, we split the sample into high E-Index and low E-Index. Results are reported in the two columns associated with E-Index in Table 8. We do not find evidence consistent with Hypothesis 5. Focusing on the low E-Index column, all the coefficients are statistically insignificant and in most cases with the opposite sign from what Hypothesis 5 predicts.

[Insert Table 8 here]

2. CEO Tenure

A CEO with a long tenure has the opportunity to institute changes in the firm's structure to increase his/her entrenchment (Finkelstein and Hambrick, 1989). Similarly, Shleifer and Vishny (1989) show that longer tenure allows for CEOs' self-dealing. Therefore, CEOs with longer tenure are more likely to be entrenched. We follow Chava et al. (2010) and use the length of CEO tenure as a factor associated with entrenchment. Hypothesis 5 suggests a rise in the CDS spreads for firms with CEOs who have (relatively) shorter tenure (low entrenchment) subsequent to the passage of a shareholder-sponsored proposal.

Our tenure data is collected from Executive Comp. We split the sample into two groups: firms with CEOs with tenure length of less than four years and with CEOs with tenure length of four years or more.[16] Focusing on the column labeled "Tenure < 4yr" in Table 8, we see that the findings do not support our hypothesis. Similar to the results for E-Index, all coefficients are insignificant; and with one exception, they all have the wrong sign (opposite to what our hypothesis suggests).

[15] We use the data available on Professor Lucian Bebchuk's website until 2006. For years after 2006, we use the ISS (RiskMetrics) database (more specifically, its Governance database) and manually construct the index by adding six dummies for the six categories. The median E-Index of our sample is three.

[16] We also split our sample using tenure length of five years. Results are virtually the same.

3. CEO Duality

Boards have a fiduciary duty to protect the interests of shareholders. This role requires independence and effectiveness. When a CEO is also the chairman of the board, the independence and effectiveness of the board is fundamentally undermined, which exacerbates entrenchment (Jensen (1993); Boyd (1994)). Following Chava et al. (2010), we use CEO duality as a measure of entrenchment. Hypothesis 5 implies that increasing shareholder control for firms without CEO duality should lead to an increase in the CDS spreads of these firms following the passage of a proposal.

We collect the data on CEO duality from the Director database of ISS (RiskMetrics) and split the sample into two groups: firms with and without CEO duality. Looking at firms without CEO duality, we see that all coefficients are insignificant with a negative sign, contradicting our hypothesis.

4. Acquisition

As argued by Chava et al. (2010), empire building is a factor that is particularly associated with entrenchment. The reason is that the main form of empire building is by expanding the firm's assets through value-destroying acquisition. Therefore, acquisition is a common variable to proxy for empire building and, by association, for entrenchment. Thus, we use firms' acquisitions as a proxy for entrenchment. For firms with low acquisition activities (low entrenchment), increasing shareholder control alleviates managerial entrenchment where entrenchment is low. Thus, Hypothesis 5 suggests that the CDS spreads should rise for these firms.

Firm's acquisition data are collected from COMPUSTAT. Using the median acquisition volume scaled by total assets, we split the sample into high and low acquisition activity groups. Consistent with earlier findings, we find that for firms with low acquisition activity, all coefficients are insignificant; with one exception, they have negative signs, opposite to what Hypothesis 5 predicted.

Our interpretation of the results in this subsection is that the marginal positive effect of ameliorating managerial entrenchment is large enough to offset its marginal negative impact on shareholder-bondholder conflict, rendering insignificant coefficients with negative signs. A conservative interpretation of these results is that the increase in the costs – both direct and indirect – of stronger shareholder control to bondholders is not large enough to overshadow the benefits of lowering managerial entrenchment, even where those benefits are expected to be minimal.

Overall, our cross-sectional evidence confirms our baseline results and is consistent with Hypothesis 4 but inconsistent with Hypothesis 5. We show that in occasions where entrenchment dilutes shareholder opportunism, ameliorating managerial entrenchment has an indirect adverse impact on bondholders. However, our evidence suggests that the marginal benefit of ameliorating entrenchment is larger than its indirect adverse effect. To summarize, results seem to indicate that the positive impact of the management disciplining channel is larger than the direct negative effect of the wealth redistribution channel and the indirect adverse impact of the opportunism resistance channel combined.

However, our cross-sectional results have an alternative interpretation that we cannot completely rule out. While we consistently show there is a net positive effect on bondholders of stronger shareholder control, the effect exists only for firms with speculative credit ratings, large CEO ownership, high leverage, those who pay high dividends, and those with shrinking cash flows. Speculative credit rating, high leverage, and shrinking cash flows are characteristics of firms that are either financially distressed or on the path of becoming so. Bondholders of companies that are well distanced from default are more confident about receiving their coupon payments. Their position is not significantly enhanced by increased shareholder control, and therefore they are not concerned with changes in corporate governance structure. This means improvements in corporate governance mainly matters for firms that are closer to default. This interpretation is consistent with the findings in Bhojraj and Sengupta (2003) and Klock et al. (2005), who argue that bondholders' benefits from improvement in corporate governance should be larger for firms closer to default. Further, our framework implies that addressing entrenchment where entrenchment is high should lead to a pronounced reduction in the CDS spreads of these firms. The insignificant coefficients for firms with high existing levels of entrenchment (high E-Index, a tenure length of more than four years, and with CEO duality) add credibility to the alternative interpretation. Nevertheless, consistent with our framework, we do find a large drop in CDS spreads of firms with high acquisition activities. As discussed earlier, high acquisition activities could proxy for entrenched management (Chava et al., 2010). Moreover, while this alternative interpretation can be easily argued for firms with speculative credit rating, high leverage, and shrinking cash flows, there is no reason to believe that firms with high CEO ownership and high dividends are necessarily close to default. Therefore, while we cannot completely refute the alternative interpretation of the cross-sectional results, we do have some evidence suggesting that the positive effect on bondholders of stronger shareholder control is not exclusively relevant to risky and close-to-default firms. It is also important to note that the alternative interpretation is about where the positive effect is manifested and not about its existence.

VI. Robustness Checks

In this section we conduct a series robustness test. Specifically, we control for the effect equity returns to ensure that our finding is not a mechanical effect of positive equity return documented by CGG. To alleviate the concern that rating-adjusted spreads may produce inconsistent estimates, we conduct our analysis using unadjusted CDS spreads with rating fix effects. Next, we address the vote manipulation concerns raised by Bach and Metzger (2019) which would invalidate random-assignment assumption of RDD. Finally, we address the sample selection bias caused by using CDS firms (Subrahmanyam et al. (2014a)) in two way; first, by comparing our sample financial- and governance-related characteristics with those of public firms (in the COMPUSTAT universe) during the sample period; second, and more formally, by employing a Heckman (1979) type self-selection model (similar to Subramanyam et al. (2014a)) in conjunction with RDD design. Overall, results of these analyses confirm our main findings. These analyses are discussed in detail in Section IX.G in the internet appendix.

VII. Further Discussion

A. Long-Run Effects of Governance Proposals

In this section, we investigate whether the decline in the riskiness of debt documented in previous sections is consistent with the evolution of factors affecting the risk over the long term and provide some evidence for the long-term impact of a governance change on firms. In particular, we are interested in determining whether a drop in CDS spreads over the days following the passage of a proposal is indicative of long-term improvements in variables affecting credit risk as well as in operating performance measures. In doing so, we use the model specification in Equation (A3) for which the treatment indicator is aggregated as in Equation

(A5) with separate polynomials of order four on each side of the threshold. Results are reported in Table 9.

The reported coefficients in Table 9 estimate the difference between changes in a set of variables for proposals that pass and those that fail by a small margin over the years after an election date. Each coefficient corresponds to a separate regression for each year and reports the cumulative effect of governance improvement on each outcome variable since the voting year. Focusing on the first column, the dependent variable in all models is a credit rating index, which is equal to 1 for "D" rated bonds and increases to 22 for "AAA" bonds where every rating category is divided into three notches using plus and minus signs. We observe on the first row that one year after election, the difference is positive but statistically insignificant. However, starting from the second year, the difference becomes positive and increasingly significant until year $t + 5$. For example, in the second row we see that two years after the election the average credit rating increases by about half a notch. Notice that improvements in firms' ratings after a governance proposal is passed follow an increasing pattern and stay significantly away from zero. Therefore, we conclude that the long-term real effect of passing governance proposals materializes as improvement in credit rating, indicating lower probability of default. This is consistent with the short-term drop in CDS spread that we documented in previous sections.

[Insert Table 9 here]

Similarly, in Columns 2 to 7 we find evidence supporting lower riskiness of debt due to improvement in financial risk indicators, better operating performance, and an increase in cash flow. The results in Columns 2 to 4 show that in one year after election, z-score improves by 0.107 (equivalent to a 6% increase for a typical firm in our sample), while both leverage ratio and average interest rate on debt significantly drop − all consistent with lower riskiness of debt for the company. Moreover, improvements in operating performance that ultimately result in a significant increase in the cash-flow level further lowers the riskiness of debt. Columns 5 to 7 illustrate this assertion. The significant increase of 0.011 in cash-flow-to-assets ratio (equivalent to a 24% increase for a typical firm in our sample) is driven by both a boost in the sales growth rate (Column 5) and an increase in ROA (Column 6).

Results in Columns 8 and 9 offer suggestive evidence that is consistent with alleviation rather than escalation of the conflict between bondholders and shareholders. If shareholders with stronger control decide to use their additional power to maximize their share value through risk shifting by investing in riskier projects at the expense of bondholders, then both cash-flow growth volatility and stock-price volatility are expected to increase to reflect elevated risk levels. However, the results in Columns 8 and 9 show the opposite. We find a 0.004 drop in cash-flow growth volatility one year after the election. This is equivalent to a 24% drop for a typical firm in our sample. The drop in cash-flow growth volatility continues to be statistically significant for three years after the vote. Moreover, we find a statistically significant drop of 0.025 (equivalent to 1.2% for a typical firm in our sample) in stock price volatility, measured by the absolute value of the stock return one year after the vote, and the drop continues to be significant in the second year. It is well known from the theoretical credit risk literature that a lower leverage ratio reduces equity volatility, even if asset volatility remains constant (e.g., Merton (1974); Leland (1994)). Therefore, it is important to control for leverage in stock price volatility estimation. Controlling for leverage, we find that the result for stock price volatility remains almost identical.

Overall, consistent with the drop in adjusted CDS spreads on and during the days following the passage of governance proposals, we find long-term improvement in operating performance, financial risk, and credit-risk profile of the companies in our sample. These results indicate that even in the long-run, the net effect of stronger shareholder control on bondholders is positive. The fact that credit agencies upgrade their credit ratings and lenders charge a lower rate in the years following the election is indicative of actual changes in governance structure that has resulted in lower risk assessment by external monitors.

B. Comparison to Prior Findings

At first glance, our result showing that the passage of G-related proposals has no significant impact on bondholders seems inconsistent with the literature that views takeover as another risk factor to bondholders (Kim and McConnell (1977); Shleifer and Vishny (1986); Cook and Martin (1991); Warga and Welch (1993); Ghosh and Jain (2000)). We argue that the impact on bondholders of the passage of G-related (antitakeover) proposals is *a priori* ambiguous due to the two opposite effects of increased shareholder control: the benefit of mitigating managerial entrenchment *vis-à-vis* the negative effect of wealth transfer. Thus, the insignificant coefficient for G-Index-related proposals in Table 4 implies that when the goal of increasing shareholder control is to enhance the market for corporate control, the adverse effect of the proposal (takeover risk) offsets the potential gains to bondholders. This interpretation is in line with prior findings in the literature.

In addition to the above argument, our seemingly inconsistent findings can be reconciled by the insights provided by Cremers et al. (2007). They show that the impact of shareholder governance on bondholder risk depends on the governance mechanism already in place. They highlight the moderating role of the existing governance mechanisms and examine the effect of their interactions on bondholders. They argue that depending on takeover vulnerability, strong shareholder control can increase or decrease yield spreads. They find that strong shareholder control increases (decreases) spreads if the firm is exposed to (protected from) takeover. In our baseline estimation, we do not condition on takeover vulnerability. Therefore, these opposing effects could offset each other and may be the reason for the insignificant coefficient. In fact, for the subset of our dataset for which G-Index is available, conditioning our estimation on G-Index produces results consistent with those of Cremers et al. (2007). (G-Index can be used as a proxy for takeover vulnerability, with higher G indicating lower takeover vulnerability.) This result is reported in Table A.4 in the Internet Appendix. We find that for companies with G-Indexes above the median ($G \geq 10$), the passage of shareholder proposals reduces bondholder risk by 3.66 bps, whereas for firms with G-Indexes below the median ($G \leq 9$), bondholder risk increases by 1.84 bps.

Moreover, the absence of an effect of the passage of G-Index-related proposals on CDS spreads seems to be in contradiction to the results in Klock et al. (2005) and Chava et al. (2009). These two studies show that governance improvement (defined in terms of lower antitakeover provisions) leads to an increase in spreads. Klock et al. (2005) find a negative relationship between bond yield spread and G-Index. Using the G-Index, Chava et al. (2009) show that firms with lower antitakeover provisions pay more for their bank loans. However, we find that the passage of G-Index-related proposals has no impact on bondholders. In fact, our results indicate that strong shareholder control has a net positive impact on bondholders. To understand the source of this difference, we look for differences between our study and theirs in terms of sample and empirical methodology.

Klock et al. (2005) regress bond yield spreads on G-Index, whereas we employ RDD. In fact, when we follow their methodology by regressing CDS spreads on G-Index, we find a significant negative coefficient that is comparable to theirs. This result is reported in Table A.5 in the Internet Appendix. Also, as discussed above, the insignificant coefficient for the G-Index-related proposal is a manifestation of the trade-off that bondholders face. When a proposal has an adverse impact on bondholders, which is likely to be the case for G-Index-related proposals, the benefit of strong shareholder control is diminished.

Results in the study by Chava et al. (2009) are mainly driven by low-leverage firms and those that are of better credit risk at the time of loan origination. However, our results are mainly driven by firms with high leverage and speculative-grade credit rating. Thus, the inconsistency between our findings and theirs could be an artifact of the differences in our samples, making it specifically imperative to compare the leverage ratios between our samples. This comparison shows that we have almost identical leverage ratios of 29%. Moreover, our sample is dominated by investment-grade bonds: 75% investment versus 25% speculative. This leads us to the second source of difference: the empirical methodology. As pointed out above, when we follow the methodology of Klock et al. (2005) and Chava et al. (2009) and regress CDS spreads on G-Index, we confirm their findings. (See Table A.5 in the Internet Appendix.)

We conclude that the inconsistencies between our results and those of prior studies can be attributed at least in part to the difference in our empirical designs. Although RDD is subject to the standard criticism of identifying only the local average treatment effect, it is a widely used method in corporate finance research and is deemed superior in establishing a causal inference.

VIII. Conclusion

Exploiting the discontinuity in the probability of implementing shareholder-sponsored proposals around the majority threshold, we use an RDD and estimate the effect of improvements in corporate governance on bondholders. We show that passage of a governance-related proposal reduces default risk. On average, the adjusted CDS spreads decline by 12 to 25 bps in a two-day window around the voting date. Confirming the existence of the indirect adverse effect of ameliorating entrenchment, the reported positive effect is attenuated where entrenchment dilutes shareholder opportunism.

In the cross-section, we show that the benefit from increased shareholder control is stronger where the conflict of interest between shareholders and bondholders is higher, i.e., firms with noninvestment credit rating, with high CEO ownership, with high leverage, those who pay high dividends, and for those with shrinking cash flows. Further, we provide evidence that even for these firms the pronounced drop in CDS spreads is offset due to the indirect adverse impact on bondholders of mitigating entrenchment. However, we do not find an increase in CDS spreads as a result of stronger shareholder control even where the marginal benefit of mitigating managerial entrenchment is low. These results suggest that the benefit of addressing managerial entrenchment is larger than the combined direct negative effect of wealth transfer and the indirect adverse effect of alleviating entrenchment caused by increased shareholder control; at the very least, they imply that the negative sides of increased shareholder control are secondary to the gains resulting from mitigating managerial entrenchment.

Moreover, splitting the proposals into takeover- and nontakeover-related, we find that CDS market reaction is mainly driven by nontakeover-related proposals. This contrasts with CGG, who find that takeover-related (G-Index-related) proposals drive stock market reactions. Focusing on nontakeover-related (non-G-Index-related) proposals, we show that results are much more pronounced for proposal types that only mitigate entrenchment without escalating shareholder-bondholder conflict (audit- and board-related proposals) and are muted for proposals that simultaneously mitigate entrenchment and exacerbate shareholder-bondholder conflict (compensation-related proposals). Moreover, consistent with the short-run reaction of the CDS market, in years following an election we find improvement in credit rating, *z*-score, and operational performance while leverage ratio, cost of debt, cash flow volatility, and stock price volatility decline. Overall, our findings suggest that by mitigating entrenchment, increasing shareholder control benefits all stakeholders and thereby reduces the riskiness of debt and hence has a net positive effect on bondholders.

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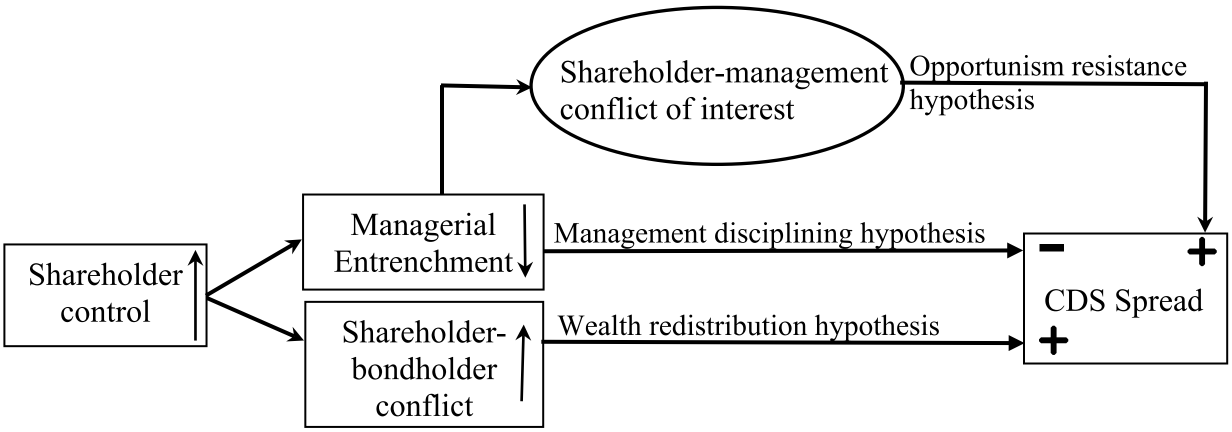
FIGURE 1
A Graphical Representation of our Conceptual Framework



TABLES

TABLE 1
Descriptive Statistics

Our sample consists of 2,718 proposals from 1,496 firm-year observations. The CDS Spread is the spread of CDSs for a firm's five-year senior unsecured debt with a modified restructuring clause in basis point (Markit). Cumulative Adjusted CDS Spread Change is the sum of the Adjusted CDS Spread Change on voting day and one day after (Markit). Stock Abnormal Returns are computed using the Fama–French and momentum factors (CRSP). Accounting variables are from COMPUSTAT: Total Asset, Leverage Ratio, ROA, Interest Coverage and Credit Rating Index. We assign numbers from 1 to 22 to the S&P bond ratings (D to AAA).

	Observations	Mean	Median	Std. Dev.	5th Per.	95th Per.
CDS_SPREAD (bps)	1,496	136.16	59.89	283.20	13.64	467.96
CUMM_ADJ_CDSSPRD_CHNG	1,489	0.20	0.00	18.60	-10.98	12.03
STOCK_ABRETURN_ONMEET_DAY	1,496	0.00	0.00	0.02	-0.02	0.03
ASSET ($millions)	1,494	82,047.63	22,114.73	210,587.80	3,092.78	410,063.20
LEVERAGE	1,492	0.29	0.27	0.20	0.06	0.60
ROA	1,494	0.04	0.04	0.10	-0.04	0.14
INT_COVRAGE_RATIO	1,418	0.56	0.22	3.49	0.00	1.06
CREDIT_RATING_INDEX	1,461	15.19	15.00	3.04	9.00	20.00

TABLE 2
Adjusted CDS Spread Response to Governance Proposals around the Majority Threshold

This table presents regression results of the cumulative adjusted change in CDS spreads from the day of the meeting $t = 0$ to the next day $t = 1$ in response to passage of a governance proposal. Adjusted CDS spreads are calculated using a rating-adjusted method. The model specification for Columns 1-5 is given in Equation (A1) and for Column 6 in Equation (A2). Column 1 estimates are based on the whole sample. Column 2 restricts the sample to observations with a vote share within 10 points of the threshold; Columns 3 to 5 restrict the sample to 5, 2, and 1 points of the threshold, respectively. Column 6 uses the full sample (winsorized at 1% and 99%) by introducing a polynomial in the vote share of order 6, one on each side of the threshold. All columns control for year fixed effects. Standard errors are clustered by firm. *p*-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Cumulative Changes in Adjusted CDS Spread					
	(1) All Votes	(2) −10; +10	(3) −5; +5	(4) −2; +2	(5) −1; +1	(6) Full Model
Pass	-0.1280	-2.049	-4.040***	-4.060**	-5.169*	-6.125***
	(0.9200)	(0.160)	(0.010)	(0.020)	(0.090)	(0.000)
R^2	0.0102	0.010	0.034	0.065	0.082	0.018
Observations	2,718	776	387	170	105	2,718

TABLE 3

Dynamics of Impact of Aggregate Votes on Adjusted CDS Spreads

This table presents the effect of passing a proposal on changes in the adjusted CDS spread on the meeting date (*t*), one day after (*t* + 1), and the cumulative effect from *t* + 2 to *t* + 7. The dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted method. The model specification is given in Equation (A6). All columns use seven separate polynomials of order six to control for the effect of any determinant of changes in adjusted CDS spreads that is continuous in vote share. Standard errors are clustered by firm. *p*-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Changes in Adjusted CDS Spread Using All Proposals		
Panel A	(1)	(2)	(3)
DAY_OF_VOTE, *t*	-1.324**	-1.363**	-1.790*
	(0.030)	(0.020)	(0.090)
ONE_DAY_LATER, *t* + 1	-1.535*	-1.585*	-1.907
	(0.090)	(0.080)	(0.190)
DAYS *t* + 2 to *t* + 7	-2.269	-2.645	-5.734
	(0.230)	(0.220)	(0.250)
Year Fixed Effect	Yes	Yes	Yes
Firm Fixed Effect		Yes	
Firm-Meeting Fixed Effect			Yes
Distance to Election Fixed Effect	Yes	Yes	Yes
R^2	0.008	0.039	0.131
Observations	11,338	11,338	11,338

TABLE 4

Adjusted CDS Spread for G-Related versus Non-G-Related Proposals

This table compares the regression of changes in adjusted CDS spreads on the passage of G-Index versus non-G-Index (other) proposals. The dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted method. The model specification is given in Equation (A6). The upper (lower) panel illustrates the effect of G-Index (other) proposals on the adjusted CDS spread. All columns use seven separate polynomials of order 6 to control for the effect of any determinant of changes in adjusted CDS spreads that are continuous in vote share. Standard errors are clustered by firm. p-values are reported in parentheses and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Cumulative Adjusted CDS Spread		
	(1)	(2)	(3)
	G-Index	G-Index	G-Index
DAY_OF_VOTE, *t*	-0.874	-0.669	-0.781
	(0.180)	(0.280)	(0.570)
ONE_DAY_LATER, *t* + 1	-1.366	-1.096	-1.224
	(0.240)	(0.360)	(0.520)
TWO_DAYS_LATER, *t* + 2	-0.974	-0.660	-0.613
	(0.120)	(0.310)	(0.670)
DAYS *t* + 3 to *t* + 7	2.115	2.758	1.789
	(0.350)	(0.290)	(0.800)
	Non-G Index	Non-G Index	Non-G Index
DAY_OF_VOTE, *t*	-1.979***	-2.306***	-3.489***
	(0.010)	0.00 0	(0.010)
ONE_DAY_LATER, *t* + 1	-1.739*	-2.183**	-3.096**
	(0.050)	(0.020)	(0.040)
TWO_DAYS_LATER, *t* + 2	-1.365	-1.777*	-2.463*
	(0.150)	(0.090)	(0.080)
DAYS *t* + 3 to *t* + 7	-5.345	-6.710	-14.113
	(0.270)	(0.150)	(0.140)
Year Fixed Effect	Yes	Yes	Yes
Firm Fixed Effect		Yes	
Firm -Meeting Fixed Effect			Yes
Distance to Election Fixed Effect	Yes	Yes	Yes
R^2	0.014	0.032	0.099
Observations	11,376	11,376	11,376

TABLE 5
Adjusted CDS Spread for Compensation-Related versus Audit-Board Proposals

This table compares the regression of changes in adjusted CDS spreads on the passage of compensation-related and audit- and board-related proposals. The dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted method. The model specification is given in Equation (A6). The left (right) panel illustrates the effect of compensation-related (audit- board-related) proposals on the adjusted CDS spread. All columns use seven separate polynomials of order six to control for the effect of any determinant of changes in adjusted CDS spreads that are continuous in vote share. Standard errors are clustered by firm. *p*-values are reported in parentheses and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Panel A: Compensation Proposals			Panel B: Audit and Board Proposals		
	(1)	(2)	(3)	(4)	(5)	(6)
DAY_OF_VOTE, t	-1.810**	-1.908**	-2.585**	-2.165**	-2.324**	-4.619**
	(0.020)	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)
ONE_DAY_LATER, $t+1$	-1.874**	-2.094**	-2.590**	-4.850***	-5.516***	-7.393***
	(0.020)	(0.010)	(0.040)	(0.000)	(0.000)	(0.000)
TWO_DAYS_LATER, $t+2$	-0.246	-0.545	-1.124	-2.520	-2.823	-4.384*
	(0.780)	(0.580)	(0.340)	(0.210)	(0.200)	(0.090)
THREE_DAYS_LATER, $t+3$	-1.011	-1.057	-2.000	-1.234	-1.233	-5.064*
	(0.350)	(0.400)	(0.210)	(0.220)	(0.290)	(0.070)
DAYS $t+4$ to $t+7$	3.622	3.624	0.655	-10.638	-10.767	-20.237
	(0.480)	(0.620)	(0.840)	(0.200)	(0.150)	(0.160)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect		Yes			Yes	
Firm - Meeting Fixed Effect			Yes			Yes
Distance to Election Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.020	0.030	0.100	0.010	0.030	0.100
Observations	10,622	10,622	10,622	9,180	9,180	9,180

TABLE 6

Indirect Effect of Entrenchment: Opportunism Resistance

This table presents the heterogenous effect of passing a proposal on changes in the adjusted CDS spread on the meeting date (t), one day after ($t + 1$), and so on and the cumulative effect from $t + 5$ to $t + 7$. DT is the sum of the indicator variables related to dividend and takeover related covenants. Higher values of the index are associated with more exposure to shareholder opportunism. The dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted method. The model specification is given in Equation (A6). All columns use seven separate polynomials of order six to control for the effect of any determinant of changes in adjusted CDS spreads that is continuous in vote share. Standard errors are clustered by firm. p-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Opportunism Resistance Hypothesis		
	(1)	(2)	(3)
DAY_OF_VOTE, t	-0.883	-1.248	-2.720*
	(0.410)	(0.270)	(0.070)
ONE_DAY_LATER, $t + 1$	-3.794**	-4.194**	-5.579**
	(0.030)	(0.020)	(0.030)
TWO_DAYS_LATER, $t + 2$	-1.176	-1.445	-2.861*
	(0.230)	(0.200)	(0.060)
THREE_DAYS_LATER, $t + 3$	-0.328	-0.578	-3.234
	(0.830)	(0.710)	(0.100)
FOUR_DAYS_LATER, $t + 4$	-1.346	-2.034*	-4.029**
	(0.200)	(0.080)	(0.040)
DAYS $t + 5$ to $t + 7$	-0.482	-1.694	-4.872
	(0.890)	(0.630)	(0.320)
DT × DAY_OF_VOTE, t	-0.394	-0.121	0.214
	(0.550)	(0.860)	(0.790)
DT × ONE_DAY_LATER, $t + 1$	1.952	2.237*	2.592*
	(0.110)	(0.090)	(0.100)
DT × TWO_DAYS_LATER, $t + 2$	-0.030	0.163	0.749
	(0.960)	(0.830)	(0.420)
DT × THREE_DAYS_LATER, $t + 3$	0.316	0.303	1.241
	(0.670)	(0.690)	(0.200)
DT × FOUR_DAYS_LATER, $t + 4$	0.332	0.761	1.035
	(0.540)	(0.200)	(0.280)
DT × DAYS $t + 5$ to $t + 7$	0.004	0.931	1.446
	(1.000)	(0.560)	(0.570)
DT	0.010	0.074	0.000
	(0.960)	(0.820)	(0.890)
Year Fixed Effect	Yes	Yes	Yes
Firm Fixed Effect		Yes	
Firm-Meeting Fixed Effect			Yes
Distance to Election Fixed Effect	Yes	Yes	Yes
R^2	0.022	0.045	0.124
Observations	10,796	10,796	10,796

TABLE 7
Muting Wealth Redistribution Channel: Firms with High Existing Level of Shareholder-Bondholder Conflict

This table reports the heterogeneity in the effect of votes on adjusted CDS spreads for the cross-section of firms with high existing level of shareholder-bondholder conflict. Credit Rating columns compare the effect for companies with an investment grade bond rating (BBB and above) and noninvestment grade (high yield) issues. CEO Ownership columns compare the effect for companies with large (top quartile) and small (bottom quartile) insider ownership, measured by the percentage of company shares owned by the CEO. Leverage columns compare the effect for companies with high (top quartile) and low (bottom quartile) leverage. Dividend columns compare the effect for companies with high (top quartile) and low (bottom quartile) dividends. Cash Flow Growth columns compare the effect for companies with shirking and expanding cash flows. Panel B shows that ameliorating entrenchment can increase CDS spreads through its indirect negative effect. DT is the sum of the indicator variables related to dividend and takeover related covenants. Higher values of the index are associated with more exposure to shareholder opportunism. In all specifications the dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted method. The model specification is given in Equation (A6). All columns use seven separate polynomials of order six to control for the effect of any determinant of changes in adjusted CDS spreads that are continuous in vote share. Standard errors are clustered by firm. *p*-values are reported in parentheses and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

Panel A	Cumulative Adjusted CDS Spread									
	Credit Rating		CEO Ownership		Leverage		Dividend		Cash Flow Growth	
	Investment Grade	High Yield	Low CEO Ownership	High CEO Ownership	Low Leverage	High Leverage	Low Dividend	High Dividend	Shrinking Cash Flow	Expanding Cash Flow
DAY_OF_VOTE, *t*	-0.452	-5.213*	-0.425	-4.276*	-1.950	-4.029	1.799	-7.492*	-5.720***	-0.142
	(0.340)	(0.090)	(0.810)	(0.080)	(0.570)	(0.210)	(0.280)	(0.080)	(0.010)	(0.830)
ONE_DAY_LATER, *t* + 1	-1.171	-6.140**	0.030	-3.971	1.527	-12.110**	-1.530	-2.421	-5.313**	-0.230
	(0.190)	(0.020)	(0.980)	(0.170)	(0.420)	(0.030)	(0.740)	(0.160)	(0.020)	(0.710)
TWO_DAYS_LATER, *t* + 2	-0.024	-8.038**	0.789	-5.019*	0.174	-8.062*	3.683	-3.156*	-2.098	-0.305
	(0.950)	(0.050)	(0.230)	(0.090)	(0.920)	(0.060)	(0.430)	(0.070)	(0.350)	(0.480)
THREE_DAYS_LATER, *t* + 3	-0.558	-2.946	2.224	-11.943*	-0.369	-14.583***	4.671	-8.804**	-7.757*	0.318
	(0.580)	(0.160)	(0.120)	(0.090)	(0.900)	(0.000)	(0.600)	(0.030)	(0.060)	(0.610)
DAYS *t* + 4 to *t* + 7	-0.484	-2.793	4.144	2.979	8.815	-22.781	7.502	-15.478*	-8.015*	2.486
	(0.578)	(0.807)	(0.410)	(0.580)	(0.310)	(0.200)	(0.197)	(0.062)	(0.100)	(0.120)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance to Election Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.030	0.080	0.130	0.140	0.160	0.240	0.1534	0.094	0.120	0.110
Observations	8,582	2,794	1,144	1,143	1,134	1,134	1,196	1,194	2,143	2,361

Panel B	Credit Rating		CEO Ownership		Leverage		Dividend		Cash Flow Growth	
	Investment Grade	High Yield	Low CEO Ownership	High CEO Ownership	Low Leverage	High Leverage	Low Dividend	High Dividend	Shrinking Cash Flow	Expanding Cash Flow
DAY_OF_VOTE, *t*	-0.870	-3.171	-1.799	-3.565	-1.629	-2.647	2.034	-11.596*	-8.184*	0.717
	(0.420)	(0.430)	(0.540)	(0.140)	(0.300)	(0.240)	(0.480)	(0.070)	(0.070)	(0.620)
ONE_DAY_LATER, *t* + 1	-3.002*	-10.551*	0.767	-8.596*	-1.533	-1.613	-6.571	-3.463*	-10.205***	1.043
	(0.100)	(0.090)	(0.630)	(0.090)	(0.580)	(0.520)	(0.420)	(0.100)	(0.010)	(0.390)
TWO_DAYS_LATER, *t* + 2	-0.108	-10.323	0.671	-7.347**	0.460	0.448	11.567	3.670	-3.318	-0.486
	(0.880)	(0.100)	(0.680)	(0.020)	(0.750)	(0.790)	(0.400)	(0.430)	(0.470)	(0.600)
THREE_DAYS_LATER, *t* + 3	-0.946	-0.811	4.663***	-15.543***	7.043	-1.776	11.352	-0.294	-13.778***	0.635
	(0.550)	(0.800)	(0.000)	(0.010)	(0.280)	(0.560)	(0.170)	(0.970)	(0.010)	(0.580)
FOUR_DAYS_LATER, *t* + 4	-0.637	-4.400	2.453	-10.471**	-0.533	-16.873***	0.087	-5.693	-4.499	-0.134
	(0.380)	(0.140)	(0.310)	(0.010)	(0.840)	(0.010)	(0.990)	(0.200)	(0.170)	(0.900)
DAYS *t* + 5 to *t* + 7	-0.292	-5.853	-2.661	-2.602	-2.665	-3.196	11.536	-8.441	-9.523	5.678
	(0.870)	(0.720)	(0.540)	(0.670)	(0.440)	(0.590)	(0.280)	(0.170)	(0.010)	(0.060)
DT × DAY_OF_VOTE, *t*	0.402	-1.688	2.209	-0.846	1.264	-0.393	-0.031	3.608	1.856	-0.616
	(0.500)	(0.370)	(0.360)	(0.360)	(0.260)	(0.720)	(0.980)	(0.230)	(0.400)	(0.470)
DT × ONE_DAY_LATER, *t* + 1	1.856	2.792	-1.183	3.428	1.449	-1.385	3.335	1.017**	3.639**	-0.766
	(0.130)	(0.370)	(0.190)	(0.140)	(0.110)	(0.230)	(0.220)	(0.030)	(0.010)	(0.310)
DT × TWO_DAYS_LATER, *t* + 2	0.093	2.459	-0.095	2.445*	0.413	-0.058	-5.113	-0.892	0.939	0.146
	(0.830)	(0.490)	(0.930)	(0.050)	(0.720)	(0.970)	(0.430)	(0.350)	(0.670)	(0.820)
DT × THREE_DAYS_LATER, *t* + 3	0.350	-2.343	-3.639***	6.776***	1.285	3.939	-4.197	-0.263	4.788**	-0.136
	(0.670)	(0.180)	(0.000)	(0.000)	(0.670)	(0.150)	(0.490)	(0.710)	(0.040)	(0.850)
DT × FOUR_DAYS_LATER, *t* + 4	0.234	2.045	-1.238	5.843***	1.300	7.740***	0.948	-0.730	2.090	0.127
	(0.490)	(0.140)	(0.100)	(0.000)	(0.250)	(0.000)	(0.570)	(0.620)	(0.140)	(0.800)
DT × DAYS *t* + 5 to *t* + 7	0.480	-0.658	-1.725	4.804	1.695	4.204	-3.074	-0.340	2.206	-1.923
	(0.630)	(0.920)	(0.540)	(0.060)	(0.550)	(0.180)	(0.540)	(0.870)	(0.240)	(0.290)
DT	-0.351*	2.209	0.098	0.172	-0.040	-1.185	0.377	0.012	-0.159	0.361
	(0.070)	(0.200)	(0.940)	(0.790)	(0.960)	(0.180)	(0.770)	(0.990)	(0.860)	(0.480)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance to Election Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.039	0.113	0.257	0.165	0.161	0.110	0.163	0.110	0.123	0.111
Observations	8,152	2,644	1,015	1,127	1,450	1,665	1,109	1,121	2,037	2,258

TABLE 8
Muting Management Disciplining Channel: Firms with Low Existing Level of Managerial Entrenchment

This table reports the heterogeneity in the effect of votes on adjusted CDS spreads for the cross-section of firms with low existing level of managerial entrenchment. The two columns associated with E-Index compare the effect for companies with high E-Index (above median) and low E-Index (below median). E-Index is entrenchment index constructed by Bebchuk et al. (2009). The two columns associated with CEO tenure compare the effect for companies with CEOs with tenure less than 4 years and more than 4 years. The two columns associated with CEO Duality compare the effect for companies with CEO duality exists and without CEO duality. The two columns associated with Acquisition Activity compare the effect for companies with high (above median) and low (below median) acquisition activities. In all specifications, the dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted method. The model specification is given in Equation (A6). All columns use seven separate polynomials of order six to control for the effect of any determinant of changes in adjusted CDS spreads that are continuous in vote share. Standard errors are clustered by firm. *p*-values are reported in parentheses and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Cumulative Adjusted CDS Spread							
	E-Index		CEO Tenure		CEO Duality		Acquisition Activity	
	Low E-Index	High E-Index	Tenure < 4 Yrs	Tenure ≥ 4 Yrs	Without Duality	With Duality	Low ACQ Activity	High ACQ Activity
DAY_OF_VOTE, t	-0.454	-1.377	-1.155	-1.037	-2.192	-0.696	-0.464	-1.843**
	(0.680)	(0.230)	(0.200)	(0.190)	(0.500)	(0.180)	(0.620)	(0.020)
ONE_DAY_LATER, $t + 1$	-1.281	-1.191	-1.144	-1.353	-1.409	-1.391*	-2.257	-1.569**
	(0.220)	(0.450)	(0.260)	(0.510)	(0.690)	(0.070)	(0.170)	(0.020)
TWO_DAYS_LATER, $t + 2$	-0.704	0.228	-1.428	-0.077	-2.178	-0.969	-1.533	-0.980*
	(0.470)	(0.910)	(0.200)	(0.910)	(0.530)	(0.110)	(0.190)	(0.070)
THREE_DAYS_LATER, $t + 3$	1.916	-1.748	-0.781	-0.698	-1.816	-0.253	0.185	-0.323
	(0.130)	(0.670)	(0.530)	(0.710)	(0.280)	(0.830)	(0.930)	(0.710)
DAYS $t + 4$ to $t + 7$	7.833	-2.305	0.468	-2.663	-7.913	-1.452	-0.216	-0.435
	(0.100)	(0.530)	(0.842)	(0.468)	(0.215)	(0.688)	(0.970)	(0.750)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance to Election Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.108	0.072	0.035	0.137	0.1148	0.0503	0.07	0.06
Observations	2,080	2,729	5,205	5,873	1,476	8,068	5,029	5,032

TABLE 9

Long-Term Effect of Governance Proposals on the Risk of Debt

This table presents the effect of passing governance proposals on long-term outcomes related to debt risk. Model specification is given by Equation (A5), where the dependent variable is the changes in outcome (i.e., credit rating) between periods *t* and *t* + 1 on the first row, *t* and *t* + 2 on the second row, and so on. Each row therefore reports the coefficient for a separate estimation. Variable definitions are provided in the Appendix. To save space we only report R^2 and number of observations for the first regression for each outcome variable. All columns control for firm and year fixed effects as well as distance-to-election. All columns allow for two separate polynomials of order four on each side of the majority threshold. Standard errors are clustered by firm. *p*-values are reported in parentheses and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Credit Rating	Z-Score	Leverage Ratio	Int Exp to Debt	Sales Growth	ROA	CF to Asset	CF Volatility	Stock Price Volatility
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ONE_YR_LATER, *t* + 1	0.101	0.107***	-0.014**	-0.003*	0.042**	0.008**	0.011**	-0.004**	-0.025***
	(0.300)	(0.000)	(0.020)	(0.070)	(0.050)	(0.020)	(0.020)	(0.030)	(0.000)
TWO_YRS_LATER, *t* + 2	0.445***	0.057	-0.012	-0.004*	0.004	0.008	0.015**	-0.004*	-0.031**
	(0.010)	(0.310)	(0.260)	(0.070)	(0.890)	(0.200)	(0.040)	(0.080)	(0.040)
THREE_YRS_LATER, *t* + 3	0.615**	0.063	-0.009	-0.004	0.022	0.006	0.023**	-0.006*	-0.020
	(0.010)	(0.430)	(0.530)	(0.130)	(0.500)	(0.500)	(0.030)	(0.100)	(0.310)
FOUR_YRS_LATER, *t* + 4	0.672**	0.075	-0.007	-0.005	0.029	0.007	0.020	-0.006	-0.030
	(0.030)	(0.450)	(0.700)	(0.180)	(0.440)	(0.550)	(0.140)	(0.150)	(0.220)
FIVE_YRS_LATER, *t* + 5	0.687*	0.017	-0.005	-0.006	0.012	0.006	0.014	-0.005	-0.022
	(0.070)	(0.880)	(0.830)	(0.110)	(0.790)	(0.640)	(0.380)	(0.330)	(0.430)
R^2	0.160	0.070	0.120	0.080	0.040	0.080	0.040	0.130	0.670
Observations	14,557	13,732	16,964	15,081	17,010	16,561	16,754	15,896	14,876

Appendix. Variable Definition

Variable	Definition
SIZE	The logarithm of book value of total assets (AT)
LEVERAGE	The ratio of debt in current liabilities (DLC) and long-term debt (DLTT) to total assets (AT)
CDS_SPREAD	CDS Spread is the spread of CDSs for a firm's five-year senior unsecured debt with a modified restructuring clause in basis point (Markit)
CUMM_ADJ_CDS_SPRD_CHANGE	Cumulative Adjusted CDS Spread Change is the sum of the Adjusted CDS Spread Change on voting day and one day after (Markit) in basis points.
SOTCK_AB-RET-ONMEET_DAY	Stock Abnormal Returns are computed using the Fama–French and momentum factors (CRSP). Accounting variables are from COMPUSTAT
CASH/ASSETS	The ratio of cash and short-term investments (CHE) to total assets
ROA	The ratio of operating income before depreciation (OIBDP) to the book value of total assets (AT)
SALES_GROWTH	The annual growth in sales (SALE).
CF/ASSETS	The ratio of income before extraordinary items (IBC) to the lagged value of total assets (AT)
CF_VOLATILITY	The standard deviation of the annual growth rate of cash flows, where cash flow growth rate is the ratio of change in operating income before depreciation (OIBDP) to the average of sales (SALE) in the beginning and end of a fiscal year
CREDIT_RATING_INDEX	A number between 1 and 22 corresponding to S&P domestic long-term issuer credit rating (SPLTICRM)
INT_COVRAGE_RATIO	The ratio of interest and related expense (XINT) to the sum of income before extraordinary items (IB) and interest and related expense (XINT)
CEO_OWNERSHIP	The Executive Comp's CEO stock ownership (SHROWN_TOT_PCT)
Z-SCORE	3.3 × pre-tax income (PI) + sales (SALE) + 1.4 × retained earnings (RE) + 1.2 × (current assets (ACT) – current liabilities (LCT)) divided by total assets (AT).
INT_EXP-TO-DEBT	The ratio of interest and related expense (XINT) to the sum of the debt in current liabilities (DLC) and long-term debt (DLTT).
STOCK_PRIC_VOL	Annual average of the logarithm of the absolute value of the percentage change in daily stock price

All abbreviations in parentheses refer to annual COMPUSTAT items.

Internet Appendix
for
"The Impact of Stronger Shareholder Control on Bondholders"

Abstract

This online appendix provides detailed discussions and analyses related to (1) diminishing marginal effect of bondholder wealth expropriation of stronger shareholder control, (2) regression discontinuity design and its validity tests, such as continuity in vote distribution and preexisting differences, (3) superiority of credit default swap relative to bond yield spreads, (4) a graphical analysis of the cumulative adjusted CDS spreads, (5) constructing the covenant index, and (6) a battery of robustness checks that includes (i) controlling for equity returns, (ii) using unadjusted CDS spreads, (iii) vote manipulation, (iv) CDS sample selection bias. This internet appendix contains 12 tables and 6 figures.

I. Internet Appendix

Tables

Table A.1
Shareholder Governance Proposals

This table summarizes the shareholder proposals for observations with nonmissing company name, voting date, and vote result from ISS and CDS from Markit from 2001 to 2011.

Panel A: Shareholder Proposal Summary Statistics

Year	Shareholder Proposals	Approved Proposals	Percentage Approved Proposals	Average Vote Outcome	Std. Dev. Vote Outcome
2001	105	21	27.3%	20.0%	21.01
2002	177	61	36.4%	34.5%	22.64
2003	331	110	35.1%	33.2%	23.48
2004	289	75	32.0%	26.0%	24.67
2005	274	75	34.5%	27.4%	23.37
2006	318	104	40.8%	32.7%	22.80
2007	327	83	37.0%	25.4%	21.64
2008	214	50	38.0%	23.4%	22.62
2009	282	93	43.2%	33.0%	20.39
2010	242	66	40.5%	27.3%	19.67
2011	159	37	40.0%	23.3%	20.53
Total	2,718	775	37.2%	28.5%	22.58

Panel B: Type of Governance Proposals

Proposal Type	Shareholder Proposals	Percentage Approved Proposals	Average Vote Outcome
Auditors	35	2.86%	16.65%
Board	381	3.41%	25.20%
Compensation	918	10.35%	27.20%
G-Index	947	58.18%	53.76%
Voting	228	40.79%	47.82%
Other	209	10.53%	20.07%
Total	2,718	28.51%	37.22%

Table A.2
Description of All Shareholder Proposals

Type	Description Proposal	Observations	Average Vote Outcome	Discontinuity #-2,+2	Discontinuity #-5,+5	Discontinuity #-10,+10
Audit		35	2.9%	0	1	1
	Rotate auditors	1	0.0%	0	0	0
	limit consulting by auditors	31	0.0%	0	0	0
	Shareholder approval of auditor	3	33.3%	0	1	1
Board		381	3.4%	13	26	63
	Commit to/report on board diversity	10	0.0%	0	0	0
	Increase audit committee Independence	1	0.0%	0	0	0
	Increase key committee Independence	13	0.0%	0	0	0
	Lead director	4	0.0%	0	0	1
	Limit director tenure	25	0.0%	0	0	0
	Miscellanea	68	2.9%	4	8	12
	Separate chairman/CEO	222	4.1%	8	14	44
	Allow union/employee reps on the board	2	0.0%	0	0	0
	Create nominating committee	1	0.0%	0	0	0
	Increase compensation committee independence	5	20.0%	1	2	3
	Independent nominating committee	4	0.0%	0	0	0
	Majority of independent directors	26	3.8%	0	2	3
Compensation		918	10.4%	54	132	257
	Add performance criteria to equity-based awards	27	14.8%	2	5	10
	Advisory vote on compensation	185	18.4%	30	71	129
	Approve/disclose/limit SERPs	28	14.3%	3	5	11
	Award performance-based stock options	88	2.27%	2	5	18
	Expense stock options	69	60.9%	13	26	43
	Disclose executive compensation	37	0.0%	1	1	3
	Hire independent compensation consultant	2	0.0%	0	2	2
	Link executive pay to social criteria	63	0.0%	0	0	0
	Misc compensation	38	5.3%	1	3	8
	Pension fund surplus reporting	15	6.7%	0	1	6
	Require equity awards to be held	41	0.0%	0	0	0
	Restrict director compensation	14	0.0%	0	0	0
	Approve executive compensation	1	50.0%	0	0	1
	Cap executive pay	308	2.1%	2	12	25
	No repricing underwater stock options	1	0.0%	0	1	1
	Pay directors in stock	1	0.0%	0	0	0
Other		209	10.9%	11	23	39
	Double board nominees	26	0.0%	0	0	0
	Miscellanea	133	15.8%	11	23	36
	Opt out of state takeover statute	1	100.0%	0	0	1
	Reincorporate to U.S. state	27	3.7%	0	0	2
	Restore preemptive rights	1	0.0%	0	0	0
	Change annual meeting date	1	0.0%	0	0	0
	Change annual meeting location	6	0.0%	0	0	0
	Study sale of company	14	0.0%	0	0	0
Voting		228	40.8%	32	72	130
	Equal access to proxy	4	0.0%	0	1	2
	Majority vote to elect directors	223	41.7%	32	71	128
	No discretionary voting	1	0.0%	0	0	0
Total G-Index		947	58.2%	60	134	288
G-Delay	Shareholders may call special meeting	129	38.8%	16	36	73
G-Delay	Repeal classified board	239	89.1%	9	24	62
G-Other	Remove antitakeover provisions & other	23	13.0%	0	0	1
G-Other	Adopt antigreenmail provision	3	33.3%	0	0	1
G-Other	Redeem or vote on poison pill	155	73.5%	15	28	45
G-Protection	Maximum director liability	2	0.0%	0	0	0
G-Protection	Vote on future golden parachutes	115	50.4%	8	21	47
G-Voting	Adopt cumulative voting	159	3.8%	6	12	32

Type	Description Proposal	Observations	Average Vote Outcome	Discontinuity #-2,+2	#-5,+5	#-10,+10
G-Voting	Confidential voting	2	100.0%	0	0	0
G-Voting	Eliminate supermajority provision	114	86.0%	6	13	27
G-Voting	Require only majority vote	6	87.5%	0	0	0

Table A.3
Frequency of Proposals per Firm-Meeting

This table presents the frequency of numbers of proposals that are put to vote on a single meeting day in our sample. Column 1 displays the total number of proposals on a meeting day; Column 2 shows the number of proposals that received at least 50% of shareholder votes; Column 3 shows number of proposals that received less than 50% of votes; and Column 4 is the ratio of Column 2 divided by Column 1.

	(1)	(2)	(3)	(4)
No. of Proposals per Meeting	Total	Passed	Not Passed	% Passed
1	850	326	524	38.35
2	700	197	503	28.14
3	408	112	296	27.45
4	320	81	239	25.31
5	200	27	173	13.50
6	90	13	77	14.44
7	49	6	43	12.24
8	56	5	51	8.93
9	45	8	37	17.78
	2,718	775	1,943	28.50

Table A.4

Heterogeneity in the Effect of Votes on Adjusted CDS Spreads with Respect to G-Index

This table compares the regression of the changes in adjusted CDS spreads on the passage of proposals for companies with high versus low G-Index. The dependent variable is the adjusted CDS spreads that are calculated using a rating-adjusted. The model specification is given in Equation (A6). The results for companies with G-Indexes above the median are presented in Columns (1) and (3), and G-Indexes below the median companies are in Columns 2 and 4. All columns use seven separate polynomials of order, six to control for the effect of any determinant of changes in adjusted CDS spreads that is continuous in vote share. The cumulative changes in CDS spreads on days t, $t+1$, and $t+2$ in Column 1 is significant at 0.10 and in Column 3 at 0.065. Standard errors are clustered by firm. p-values are reported in parentheses and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Cumulative Adjusted CDS Spread			
	(1)	(2)	(3)	(4)
	G-Index $\geq$ 10	G-Index $\leq$ 9	G-Index $\geq$ 10	G-Index $\leq$ 9
Day of Vote, t	-0.623	1.450*	-3.663	1.836*
	(0.720)	(0.060)	(0.240)	(0.060)
One Day Later, $t+1$	-4.752	0.521	-5.878	0.779
	(0.290)	(0.650)	(0.250)	(0.640)
Two days later, $t+2$	-0.884	-5.608	-1.975	-5.408
	(0.460)	(0.460)	(0.690)	(0.490)
Days $t+3$ to $t+7$	8.234	-0.261	-8.206	2.787
	(0.340)	(0.970)	(0.300)	(0.660)
Year Fixed Effect	Yes	Yes	Yes	Yes
Firm Fixed Effect			Yes	Yes
R^2	0.170	0.040	0.300	0.070
Observations	1,304	1,293	1,304	1,293

Table A.5

G-Index and Change in Adjusted CDS Spread

This table displays the result of the ordinary least squares (OLS) regression of changes in annual adjusted CDS spread on G-Index for 2002, 2004, and 2006. Control variables include accounting variables from COMPUSTAT that are used as control: Size, Leverage, ROA, Interest Coverage Ratio and an integer index. See Table A.5 for the definition of the control variables.

	CDS Spread
G-Index	-5.177**
	(0.040)
Industry Fixed Effect	Yes
Year Fixed Effect	Yes
R^2	0.5481
Observation	960

I.A Diminishing Marginal Effect of Bondholder Wealth Expropriation of Stronger Shareholder Control

In Section II.B, our framework implicitly assumes that the marginal bondholder wealth expropriation effects of stronger shareholder control fall as the level of shareholder-bondholder conflict rises. To justify this assumption, we first need a proxy for the level of shareholder-bondholder conflict and then we ought to show that the value of the risky bond falls at a decreasing pace as the proxy for shareholder-bondholder conflict increases.

According to Jensen and Meckling (1976), leverage gives rise to shareholder–bondholder conflict, where shareholders have an incentive to take on more risk to increase their value. Moreover, it is well-known that a raise in asset volatility can aggravate shareholder-bondholder conflict (Merton, 1974). Specifically, in the context of Merton-type models, equity is a call option on the corporate assets in a levered firm. The value of a risky bond is equal to the value of a portfolio of a risk-free but otherwise identical bond plus a short position in a put option written on the firm's assets. In this context, risk shifting raises asset volatility and thereby increases the value to shareholders (i.e., the value of the call option increases) but reduces the value to bondholders (i.e., the value of the short put increases). That is, risk shifting exacerbates asset substitution concerns for bondholders, which in turn aggravates shareholder-bondholder conflict. Therefore, asset volatility (volatility henceforth) is a reasonable proxy for the level of shareholder-bondholder conflict.

To justify our assumption, we need a theoretical bond valuation model and then we have to show that the first derivative of the bond value with respect to volatility is negative, while the second derivative is positive. We use Merton (1974) model as the underpinning theory. As mentioned above, in a Merton framework the value of a risky debt is essentially equal to cash (risk-free debt) minus a put option. Therefore, given that cash is insensitive to volatility, the first derivative of the bond value with respect to volatility is equal to the negative of the put option's *vega*. *Vega* of any option is always positive. Option values increase in volatility. Therefore, negative *vega* is always negative, indicating that the value of the risky bond falls as shareholder-bondholder conflict increases.

The second derivative of the bond value with respect to volatility is essentially equal to the second derivative of the put option value with respect to volatility. This "Greek" is called v*omma* (sometimes referred to as v*olga* or volatility-Gamma). *Vomma* is the rate at which v*ega* changes. However, unlike *vega, vomma* can be either positive or negative. Using Black-Scholes notations, *vomma* is negative when d_1 and d_2 have different signs.

Given that *vomma* could be either positive or negative, we resort to simulation to show that the marginal bondholder wealth expropriation effects of stronger shareholder control fall as the conflict rises. Specifically, using Merton model (1974), we simulate bond values by changing volatility while holding other parameters unchanged. These parameters are held at values that are consistent with our sample. Figures below depict the results of our simulations.

Our sample leverage ratio is 29%, therefore, in all simulation we use $29 and $100 for the face value of debt (strike of the put) and the asset value, respectively. Results are insensitive to other values for the face value of debt. According to TRACE database, the average maturity of traded plain vanilla corporate bonds during our sample period is around 9.2 years; therefore, time to maturity parameter is kept at 9.2 years.[17] We separately use the average of 3-month, 1-year, 2-year, and 10-year constant maturity Treasury rates (from FRED database) during our sample period to proxy for the risk free rate parameter.

[17] Results are robust to changing the maturity to 5 years to alleviate the concern that our sample is comprised of 5-year CDS contracts.

As depicted in Figures A.1 through A.4, our simulation result confirms that for high levels of shareholder-bondholder conflict as proxied by volatility, the marginal bondholder wealth expropriation effects of stronger shareholder control fall as the level of shareholder-bondholder conflict rises; and this simulation result is insensitive to different values of time to maturity, interest rates, and face value of debt.

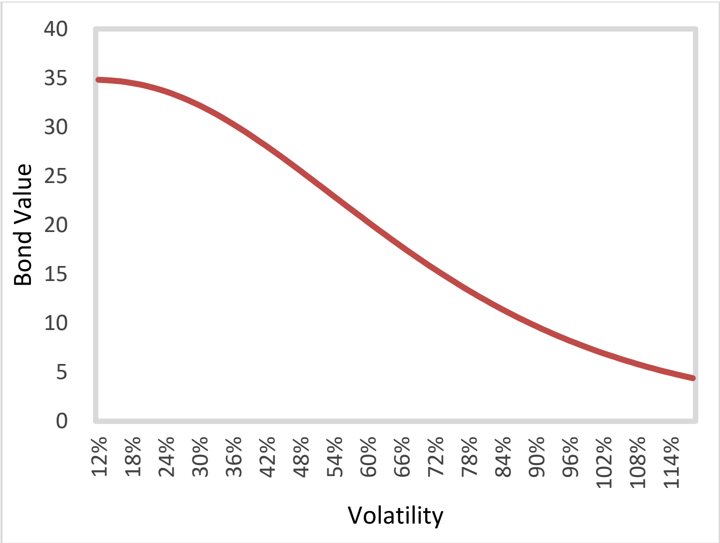


Figure A.1- Face value of is $29. Asset value is $100. Maturity is 9.2 years. Risk-free rate is 1.98%, the mean of the 3-month

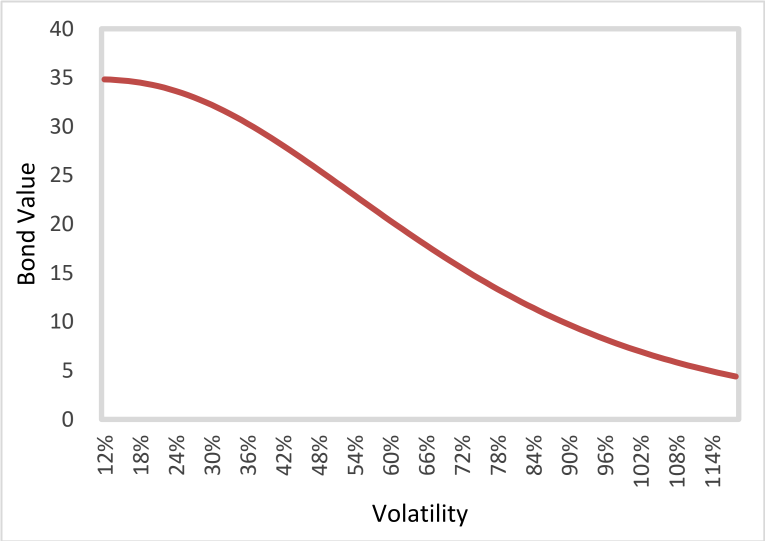
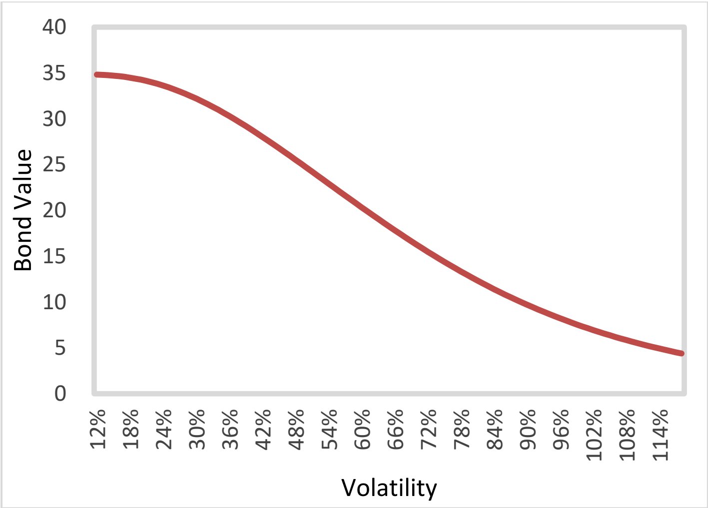


Figure A.2- Face value of is $29. Asset value is $100. Maturity is 9.2 years. Risk-free rate is 2.2%, the mean of the 1-year rate.



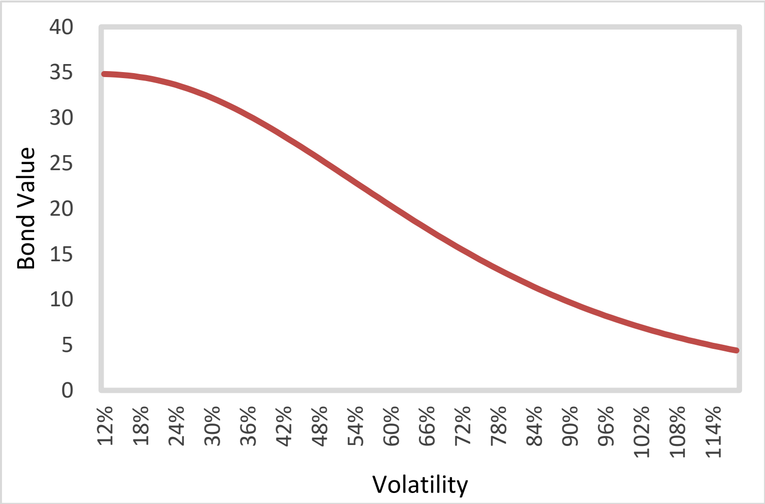


Figure A.3- Face value of is \$29. Asset value is \$100. Maturity is 9.2 years. Risk-free rate is 2.5%, the mean of the 2-year rate.

Figure A.4- Face value of is \$29. Asset value is \$100. Maturity is 9.2 years. Risk-free rate is 4.05%, the mean of the 10-year rate.

I.B Regression Discontinuity Design

Consider v_{ft} as the percentage of votes for passing a governance proposal for firm f on a meeting date at time t. If $v_{ft} \geq v^*$, where v^* is the majority threshold, the proposal passes. Using D_{ft} as an indicator for whether the proposal is passed, we call an observation "treated," or D_{ft} =1 if $v_{ft} \geq v^*$, and otherwise "untreated" or $D_{ft} = 0$.

To estimate the effect of treatment D_{ft} on an outcome variable y_{ft}, (e.g., the effect of passing a governance proposal on the adjusted CDS spread), we can write:

$$y_{ft} = k + \theta D_{ft} + u_{ft} \tag{A1}$$

where θ is the effect of passing a proposal on outcome y_{ft} ; and u_{ft} , the error term, is the omitted firm characteristics at time t that also affect the outcome variable, y_f. The endogeneity between the treatment, D_{ft}, and the error term, u_{ft}, (i.e., the voting outcome may be a function of unobservable firm characteristics) makes it quite difficult to estimate θ from Equation (A1).

To overcome the endogeneity problem, regression discontinuity design uses the exogenous shift in voting outcome for a narrow window of votes around the majority threshold. As formally shown by Lee (2008), as long as there is random noise components to the vote, the assignment of observations to the treatment group (pass a proposal and therefore $D_{ft} = 1$) and the control group (failing to pass a proposal, or $D_{ft} = 0$) can be considered random. The random assignment of observations to treatment and control enables us to get a consistent estimate that is not affected by the omitted variables.

Following the example of Lee and Lemieux (2010) to use all the observations to improve the efficiency of our estimates, we use a polynomial in votes to capture the effect of any variable that is a continuous function of the vote and affects the outcome. Using separate polynomials for observations on the right side, $P_r(v_{ft}, \gamma^r)$, and $P_l(v_{ft}, \gamma^l)$ on the left side of the majority threshold, we can write:

$$y_{ft} = \theta D_{ft} + P_r(\nu_{ft}, \gamma^r) + P_l(\nu_{ft}, \gamma^l) + u_{ft}. \quad \text{(A2)}$$

Two distinct features of the data distinguish it from a standard regression discontinuity design: (a) the dynamic nature of the treatment, i.e., treatments occur at different points of time, and the possibility of a continuation of the impact of treatment occurs over time in periods after the treatment, and (b) the intensity of treatment, i.e., on some voting days more than one proposal is passed as illustrated in Table 5. To address the dynamic features of treatment we follow the Cellini et al. (2010) dynamic version of Equation (A2) given by:

$$y_{f,t+\tau} = \theta^\tau D_{ft} + P_r(\nu_{ft}, \gamma^r_\tau) + P_l(\nu_{ft}, \gamma^l_\tau) + \alpha_\tau + \eta_c + \lambda_{ft} + e_{ft\tau} \quad \text{(A3)}$$

where $y_{f,t+\tau}$ is the outcome variable in τ periods after the vote date, α_τ is a fixed effect for the time distance to election date, η_c is the calendar year fixed effect, and λ_{ft} is the firm-election fixed effect for firm f in period t.

Alternatively, instead of estimating a separate equation for each τ, we can add distributed lags in treatment to the model as follows. Note that in this case the coefficient θ is interpreted as the causal effect per proposal passed.

$$y_{ft} = \sum_{\tau=0}^{T} \theta^\tau D_{f,t-\tau} + \sum_{\tau=0}^{T}\left[P_r(\nu_{f,t-\tau}, \gamma^r_\tau) + P_l(\nu_{f,t-\tau}, \gamma^l_\tau)\right] + \alpha_\tau + \eta_c + \lambda_{ft} + e_{ft} \quad \text{(A4)}$$

As for the second feature, multiple proposals, we follow the work of Cuñat et al. (2012) and capture the intensity of treatment by aggregating the number of proposals, D^K_{ft}, passed on a meeting day and adding up vote shares, $\sum_{K=1}^{N} \nu^K_{ft}$, for $K = 1, \ldots, N$ as follows:

$$y_{ft} = \theta \sum_{K=1}^{N} D^K_{ft} + \left[P_r\left(\sum_{K=1}^{N} \nu^K_{ft}, \gamma^r\right) + P_l\left(\sum_{K=1}^{N} \nu^K_{ft}, \gamma^l\right)\right] + u_{ft}. \quad \text{(A5)}$$

Finally, to combine the dynamic features with vote aggregation, we combine Equations (A4) and (A5) and write:

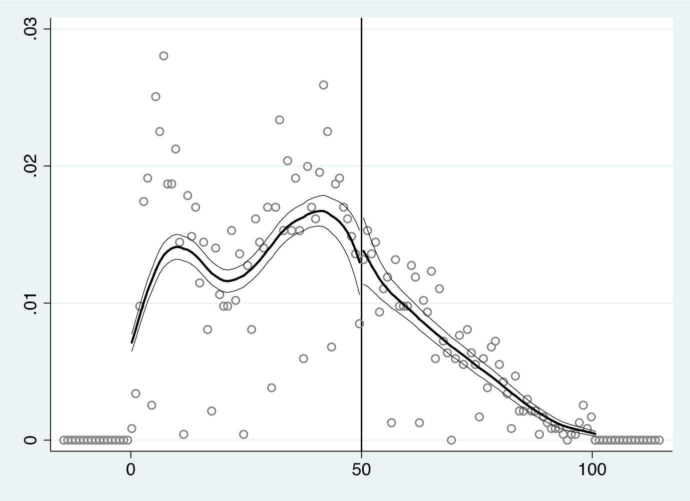
$$y_{ft} = \sum_{\tau=0}^{T} \theta^\tau \sum_{K=1}^{N} D^K_{f,t-\tau} + \sum_{\tau=0}^{T}\left[P_r\left(\sum_{K=1}^{N} \nu^K_{f,t-\tau}, {\gamma_\tau}^r\right) + P_l\left(\sum_{K=1}^{N} \nu^K_{f,t-\tau}, \gamma^l_\tau\right)\right] + \alpha_\tau + \eta_c + \lambda_{ft} + e_{ft} \quad \text{(A6)}$$

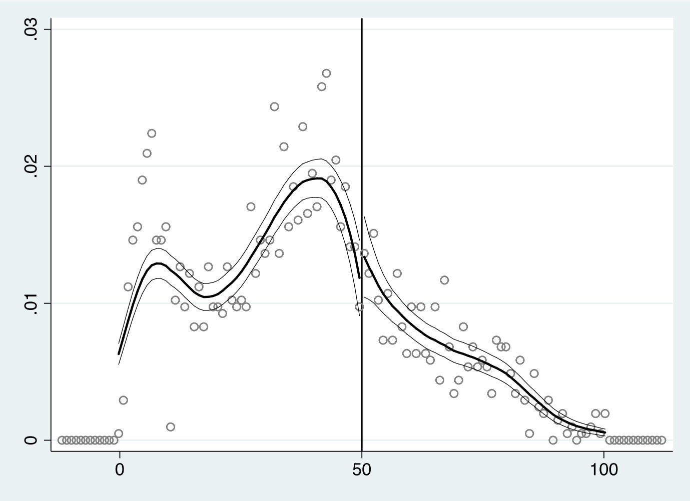
I.C Tests for Quasi-Experiment

In this section, we evaluate the extent to which our design offers a "quasi-experiment" via random assignment of observations to treatment (pass) and control (fail) groups. We test for the possibility of vote manipulation around the passing threshold and the imbalance of the resulting control and treatment groups.

I.C.1 Continuity in Vote Distribution

To verify whether the assignment to control and treatment groups is random around the threshold, we perform the standard McCrary (2008) test for continuity of vote distribution around the passing threshold. The test statistics of 0.1187 and standard deviation of 0.1385 (or a *p*-value of 0.38) indicates no discontinuity in vote distribution around the passing threshold, suggesting no manipulation of votes around the threshold. We repeat this test for proposals put to vote after 2003, given that Bach and Metzger (2019) show that there is evidence of vote manipulation around the threshold of the corporate charter for the period after 2003. Again, the test statistics of 0.2419 and standard error of 0.1838 (or *p*-value of 0.19) is suggestive of no manipulation. The density plots for both tests are provided below (Figure A.5). This is consistent with the findings of other studies (i.e., CGG and Flammer, 2015), which also find smooth distribution for shareholder-sponsored proposals around the passing threshold.





Panel A: All Proposals

Panel B: Proposals after 2003

Figure A.5 McCrary Test Results

This figure presents a density plot for the McCrary (2008) test to test for the continuity of the distribution of vote shares for shareholder proposals. Data in Panel A include all proposals in our sample between 2001 and 2011, whereas the sample is restricted in Panel B to those proposals after 2003. The horizontal axis represents the share of votes, and vertical axis is the logarithm of the estimated density.

I.C.2 Preexisting Differences

If the assignment to treatment and control groups is random, we expect the resulting groups to be similar. In Table A.6, we examine whether there are preexisting differences in firm characteristics between the two groups. Also, since one would expect the heterogeneity to reside in managerial and shareholder ownership distribution characteristics, we include variables related to both characteristics, namely CEO ownership, CEO tenure, CEO duality, E-index, and percentage of institutional ownership (collected from Factset). We test for differences in means before the election for the entire sample in Columns 1, 2, 4, and 5 as well as for observations close to the threshold in Columns 3 and 6.

In Columns 1 to 3, we test for similarity of characteristics of the treatment and control groups in the year (or day in the case of CDS spreads) before the election. Results in Column 1 show that except for size and credit rating, no other characteristics differ significantly between the two groups. When we add a polynomial in percentage of votes in Column 2, we find no significant differences between the two groups, including for size and credit rating. We find similar results for the subsample of observations close to the threshold in Column 3. Similarly, in Columns 4 to 6 we find no significant differences in changes in firm characteristics from $(t-2)$ to $(t-1)$. For managerial and shareholder ownership, we observe the same pattern. For close call proposals, there is some significant difference around discontinuity associated with CEO ownership and duality, but the difference vanishes when we employ the polynomials.

In sum, we find no evidence of vote manipulation or any preexisting differences in the treatment and control groups that contradict the random assignment assumption. Therefore, we conclude that there is no systematic difference between the treatment and control groups before the election, thus confirming the validity of our identification strategy.

In the end, we acknowledge that RDD is subject to the standard criticism that it only identifies the local average treatment effect. Bach and Metzger (2019) raise new concerns about using RDD to identify causal effects of governance provisions. However, RDD is a widely used methodology in corporate finance research to circumvent the endogeneity issues and to establish causality. As such, we reported earlier that we find no evidence of manipulation of votes around the threshold.

Table A.6

Pre-Existing Differences as a Function of Vote Outcome

In this table we examine whether there are preexisting differences in firm characteristics between the treatment (pass) and control (fail) groups. We test for differences in means in the year before the election for the entire sample in Columns 1, 2, 4, and 5 as well as for observations close to the threshold in Columns 3 and 6. The only exception is the CDS change in the first two rows, where *t* refers to days instead of years. Columns 1 to 3 consider the levels of firm characteristics, whereas Columns 4 to 6 consider the change in characteristics. Variable definitions are provided in the Appendix in the paper. Each entry is estimated using a separate regression. *p*-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by*, **, and ***, respectively.

	Before Meeting (t - 1)			Change from (t – 2) to (t – 1)		
	(1)	(2)	(3)	(4)	(5)	(6)
CDS Spread Changes (Unadjusted)	0.142	0.2	-0.376			
	(0.61)	(0.78)	(0.17)			
CDS Spread Changes (Adjusted)	-1.241	3.451	1.052			
	(0.29)	(0.34)	(0.57)			
Size	-1.084***	-0.194	-0.45	0.011	-0.009	-0.026
	(0.00)	(0.63)	(0.11)	(0.34)	(0.84)	(0.46)
Leverage Ratio	-0.024	-0.012	-0.02	-0.003	0.006	0.011
	(0.17)	(0.74)	(0.42)	(0.29)	(0.64)	(0.32)
Cash/Assets	0.01	0	0.03	-0.00001	-0.002	-0.001
	(0.21)	(0.99)	(0.20)	(0.97)	(0.86)	(0.87)
ROA	0.008	0.034	0.002	-0.001	0.001	-0.003
	(0.33)	(0.39)	(0.91)	(0.85)	(0.96)	(0.61)
Sales Growth	0.01	0.054	0.02	-0.003	0.122	0.026
	(0.28)	(0.24)	(0.55)	(0.85)	(0.20)	(0.64)
Cash Flow/Assets	0.001	0.01	0.003	0.001	-0.008	0.001
	(0.81)	(0.71)	(0.82)	(0.67)	(0.53)	(0.90)
Cash Flow Growth Volatility	-0.001	0.00	0.006	-0.001	0.001	0.00
	(0.52)	(0.96)	(0.21)	(0.37)	(0.65)	(0.99)
Credit Rating (1 to 22)	-1.341***	-0.135	-0.518	0.073	0.078	0.148
	0.00	(0.89)	(0.46)	(0.12)	(0.71)	(0.30)
Interest Coverage Ratio	0.129	-0.046	0.382	-0.038	0.011	0.003
	(0.28)	(0.88)	(0.37)	(0.86)	(0.98)	(1.00)
CEO Ownership	0.002	0.004	0.006*	-0.001	-0.002	-0.002
	(0.32)	(0.39)	(0.08)	(0.36)	(0.30)	(0.30)
CEO Tenure	0.119	0.851	0.647	0.275	-0.944	-0.739
	(0.74)	(0.48)	(0.43)	(0.19)	(0.24)	(0.20)
CEO Duality	-0.056**	0.126	0.125**	-0.013	-0.067	-0.011
	(0.02)	(0.17)	(0.01)	(0.36)	(0.45)	(0.88)
E-Index	0.717***	0.431	0.326	-0.057	-0.003	0.11
	(0.00)	(0.27)	(0.23)	(0.38)	(0.99)	(0.59)
%Institutional Ownership	6.568***	3.801	4.177	0.926**	-0.695	-1.344
	(0.00)	(0.34)	(0.15)	(0.02)	(0.68)	(0.37)
Sample	All Votes	All Votes	Close Calls	All Votes	All Votes	Close Calls
Polynomial in vote share	No	Yes	No	No	Yes	No

I.D Superiority of Credit Default Swap (CDS) relative to bond yield spread

Firms have a variety of bonds outstanding with different maturities, seniority, and liquidity. How to aggregate these different bonds to measure the total effect of a corporate event is not obvious (Bessembinder et al., 2008). In contrast, while there are CDS contracts with different maturities referencing the same entity, five-year single-name CDSs are the most common and most liquid format (Hull et al., 2004); thus, only one CDS per firm needs to be valued. By using CDS spread data, we also avoid the introduction of any additional noise arising from choosing a particular risk-free specification. The choice of a risk-free benchmark introduces noise into yield spread specifications (Houweling and Vorst, 2005), and the choice of a method to mitigate the coupon effect could exacerbate the problem. On the contrary, the notional amount of CDS contracts grew from \$0.6 trillion in June 2001 to a peak of \$62.2 trillion by the second half of 2007[18] and has rapidly become the most prominent and liquid credit derivative. In general, the CDS market is known to be far more liquid and efficient than the corporate bond market, with CDS spreads reflecting changes in the credit quality of a reference entity in a more timely manner than the spreads of the corresponding bond issues (Blanco et al., 2005; Ericsson et al., 2009). Studies by Daniels and Jensen (2005) and Zhu (2006) show that price discovery occurs first in the CDS market and subsequently in the bond market. Furthermore, since new CDS contracts can be written at any time, the CDS market is less susceptible to liquidity risk (Longstaff et al., 2005). The Ericsson et al. (2009) results further confirm that CDS spreads are less noisy in reflecting riskiness of debt than yield spreads. Contrary to Collin-Dufresne, Goldstein, and Martin (2001), they find limited evidence for the existence of a common factor.

[18] See ISDA Market Survey Summaries, 2010-1995 (http://www2.isda.org/functional-areas/research/surveys/market-surveys/).

I.E Graphical Analysis of the Cumulative Adjusted CDS Spread

Figure A.6 shows the difference in the average cumulative adjusted CDS spreads for corporate governance proposals that pass or fail within 2% of the election threshold in a time window around the election date. The time window varies from two days prior to seven days after the election date. This is the same measure as that in the fourth column of Table 3, except that in Table 3 the adjusted CDS spread is computed over a (0, +1) time window, whereas here it is calculated from (-2, 0) to (0, +7) where $t = 0$ is the election date. (For example, for $t = 1$ or the equivalent (0, +1) time window, the value is -4.060, which is identical to the value in Column 4 of Table 3.) Also presented are 90% confidence intervals as indicated by dashed lines.

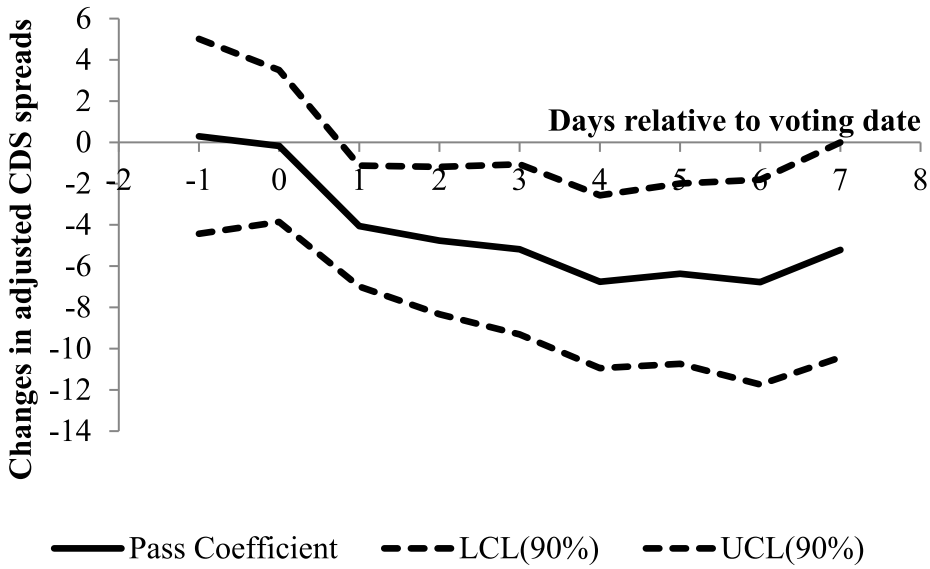


Figure A.6
Cumulative CDS Adjusted Return Around the Election Date
The solid line in this figure represents the dynamics of the average effect of passing a corporate governance proposal on the adjusted change in CDS spread over different time windows around the meeting date, $t = 0$. The dashed lines represent the 90% confidence interval for this effect. The effect is measured using a regression of the adjusted change in CDS spreads on whether the proposal passed for observations within two points of the majority threshold for a rolling window of time. This window starts from two days before meeting to the meeting date, [-2, 0], and next moves to [-1, 0], [0, 1], [0, 2], [0, 3], [0, 4], [0, 5], [0, 6], and [0, 7].

We can see from the graph that prior to the election date the cumulative adjusted CDS spreads for the proposals that pass are insignificantly different from those that do not pass. After the election date, the cumulative adjusted CDS spread for passing proposals is 4.06 bps lower than the rejected proposals in one day (time window (0, +1)), which is statistically significant at 3%. This difference widens to an average of -6.78 bps over the following days, $t = +2$ to $t = +7$. We can also observe that the largest drop in difference in cumulative spreads occurs on the first day following the election with no reversal pattern on the following days. Thus, to the extent that CDS spreads are a reliable proxy for bondholder risk, our results indicate a reduction in the riskiness of debt, and bondholders view improvement in corporate governance (defined as stronger shareholder rights) to have a net positive effect.

I.F Constructing the Covenant Index

Helwege, Huang, and Wang (2016) classify covenants into 30 types and then, following Chava et al. (2010), they aggregate them into four categories, namely restrictions on dividend (S1), subsequent financing (S2), investment (S3), and firm behavior during specific events (S4). For the purpose of this study, we focus on covenants related to dividend payout (S1) and takeover (type29).[19] We follow Helwege et al. (2016) for the calculation of S1 and type29. At the issuance of any debt instrument, we define two separate indicator variables for dividend and takeover covenants and set their value to 1 if at least one of the related covenants for each of these categories is included in that issue.

[19] Restriction on dividend payout (S1) is comprised of the following covenants: Dividend-related payments and dividend restrictions. After reviewing all the 30 covenant types and 4 categories, we concluded that covenant type 29, merger restrictions, is more closely related to takeover-related restriction. Type 29 is comprised of the following covenants: consolidation_merger, after_acquired_property_clause, voting_power_ percentage,ESOP_ voting_power_percentage, where ESOP is employee stock ownership plan. According to Helwege et al. (2016), type 29 "typically specify that the surviving entity must assume the debt and abide by all of the covenants in the debt." See Table 2 in Helwege et al. (2016) for more detail.

As discussed in the footnote, dividend and takeover covenant categories are comprised of multiple covenants restricting the same activity. This strategy avoids inflating the effect of a covenant category. Next, we aggregate our issue-level covenant data to firm-month level. Specifically, we construct two new indicator variables corresponding to the same issue-level indicators. For each firm in each month, we set the value of the newly constructed indicator equal to 1 if its corresponding issue-level indicator is 1 for at least one of the issues outstanding for that firm in that month. DT for a firm in a given month is then the sum of the two new indicators for that firm in that month. According to the results in Chava et al. (2010), higher values of the index are associated with more exposure to shareholder opportunism. Finally, we use a similar aggregation algorithm to move from monthly-level index to annual level for each firm by finding the maximum of the index for each firm across the 12 months in each year.

I.G Robustness Checks

I.G.1 Controlling for Equity Return

A potential concern with our main result is that the drop in CDS spreads may not be a direct result of governance improvement, but rather a mechanical effect of positive equity return as documented by CGG. To address this concern, in Table A.7 we re-estimate an augmented version of our models (Equations (A1) and (A2)) where equity return is added as a control variable. In Panel A, equity returns are calculated using the market model, whereas in Panel B the Fama-French Model is used to calculate equity returns.[20] Although in some cases the magnitude is smaller, overall we find that our results are robust with respect to the inclusion of equity returns. This suggests that the impact of governance

[20] Given the finding by CGG that it takes only one day for the stock market to react to shareholder proposals, we narrow our time window to one day here instead of two days in Table 3.

improvement on the CDS spread is not solely the result of the increase in equity value but rather reflects the increase in the entire firm value, i.e., both equity and debt values.

Table A.7
Adjusted CDS Spread Response to Governance Proposals Conditional on Equity Return

This table presents regression results of the cumulative adjusted change in CDS spreads from the day of the meeting $t = 0$ to the next day $t = 1$ in response to passage of a governance proposal. Adjusted CDS spreads are calculated using a rating-adjusted method. The model specifications for Columns 1-5 are given in Equation (A1) and for Column 6 in Equation (A2) with the only difference that here equity abnormal return is added as a control variable to Equations (A1) and (A2). Equity returns are calculated using Market Model in Panel A and Fama-French Model in Panel B. Column 1 estimates are based on the whole sample. Column 2 restricts the sample to observations with a vote share within 10 points of threshold; Columns 3 to 5 restrict the sample to 5, 2, and 1 points of the threshold, respectively. Column 6 uses the full sample (winsorized at 1% and 99%) by introducing a polynomial in the vote share of order 6, one on each side of the threshold. All columns control for year fixed effects. Standard errors are clustered by firm. *p*-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Panel A: Market Model					
	(1) All Votes	(2) −10; +10	(3) −5; +5	(4) −2; +2	(5) −1; +1	(6) Full Model
Pass	0.505	-1.279	-4.263***	-2.682**	-2.934*	-6.486**
	(0.600)	(0.120)	(0.010)	(0.020)	(0.100)	(0.020)
Equity Abnormal Return (Market Model)	-0.409	0.201	-0.083	-0.824*	-1.012**	-0.386
	(0.330)	(0.780)	(0.920)	(0.090)	(0.050)	(0.370)
R^2	0.010	0.010	0.034	0.065	0.082	0.017
Observations	2,718	776	387	170	105	2,724

	Panel B: Fama-French					
	(1) All Votes	(2) −10; +10	(3) −5; +5	(4) −2; +2	(5) −1; +1	(6) Full Model
Pass	0.515	-1.260	-4.287***	-2.713**	-2.945	-6.426**
	(0.590)	(0.130)	(0.010)	(0.020)	(0.110)	(0.020)
Equity Abnormal Return (Fama French Model)	-0.464	0.116	0.039	-0.864	-1.042	-0.444
	(0.290)	(0.880)	(0.970)	(0.160)	(0.120)	(0.320)
R^2	0.010	0.010	0.034	0.065	0.082	0.017
Observations	2,718	776	387	170	105	2,724

I.G.2 Unadjusted CDS Spreads

Another potential concern is the way the abnormal CDS spreads are calculated by using a rating-adjustment method. As illustrated in Equation (1), rating-adjusted CDS spreads are calculated by subtracting the average CDS spreads for issues with the same rating. Gormley and Matsa (2014) show that demeaning the dependent variable with respect to the group can produce inconsistent estimates; they recommend using a fixed effect model instead. To do this, we re-estimate the baseline specification in Tables 3 and 4 by using changes in unadjusted CDS spreads as a dependent variable and add fixed effects for credit rating categories. The results are presented in Tables A.8 and A.9.

Table A.8
Unadjusted CDS Spread Response to Governance Proposals

This table presents regression results of the cumulative unadjusted change in CDS spreads from the day of the meeting $t = 0$ to the next day $t = 1$ in response to passage of a governance proposal. The model specification for Columns 1-5 is given in Equation (A1) and for Column 6 in Equation (A2). All columns control for year and rating fixed effects. Column 1 estimates are based on the whole sample. Column 2 restricts the sample to observations with a vote share within 10 points of the threshold; Columns 3 to 5 restrict the sample to 5, 2, and 1 points of the threshold, respectively. Column 6 uses the full sample (winsorized at 1% and 99%) by introducing a polynomial in the vote share of order 6, one on each side of the threshold. Standard errors are clustered by firm. p-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Cumulative Changes in Unadjusted CDS Spread					
	(1) All Votes	(2) −10; +10	(3) −5; +5	(4) −2; +2	(5) −1; +1	(6) Full Model
Pass	0.210	-1.473	-2.926**	-3.061**	-3.461	-4.811**
	(0.880)	(0.340)	(0.040)	(0.020)	(0.150)	(0.020)
R^2	0.033	0.022	0.047	0.137	0.198	0.037
Observations	2,718	776	387	170	105	2,718

Table A.9
Dynamics of Impact of Aggregate Votes on Unadjusted CDS Spreads

This table presents the effect of passing a proposal on changes in the unadjusted CDS spread on the meeting date (t), one day after ($t + 1$), and the cumulative effect from $t + 2$ to $t + 7$. The dependent variable is the unadjusted CDS spread. The model specification is given in Equation (A6). All columns use seven separate polynomials of order six to control for the effect of any determinant of change on adjusted CDS spreads that are continuous in the vote share. Standard errors are clustered by firm. p-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

	Changes in Unadjusted CDS Spread Using All Proposals		
	(1)	(2)	(3)
Day of Vote, t	-1.353**	-1.308**	-1.942*
	(0.030)	(0.030)	(0.060)
One Day Later, $t + 1$	-1.336	-1.302	-1.853
	(0.130)	(0.150)	(0.200)
Days $t + 2$ to $t + 7$	-2.305	-2.205	-6.434
	(0.410)	(0.480)	(0.310)
Year Fixed Effect	Yes	Yes	Yes
Firm Fixed Effect		Yes	
Firm-Meeting Fixed Effect			Yes
Distance to Election Fixed Effect	Yes	Yes	Yes
Rating Fixed Effect	Yes	Yes	Yes
R^2	0.016	0.034	0.102
Observations	11,376	11,376	11,376

Table A.8 shows that our main results are robust with respect to how we adjust for rating. When using fixed effects instead of demeaning the CDS spreads for rating categories, the size of the Pass coefficient drops by up to 1.7 bps, but by and large the results are still statistically significant with the caveat that *p*-values are marginally larger than those in Table 2. Table A.9 also provides similar evidence in support of robustness of the results for the dynamics of the impact. Similar to Table 3, CDS spreads drop proportionately on day t, $t + 1$, and the days between $t + 2$ and $t + 7$. However, unlike the results in Table 3, the drop in CDS spreads is statistically significant only on day t.

I.G.3 Vote Manipulation

Another legitimate concern with our analysis is that RDD is invalid if agents can alter or manipulate the outcome. In the context of our study, the concern is that managers may have incentives to acquire power, formal and informal, to intervene in close votes and manipulate the outcome towards the passage (failure) of manager-friendly (shareholder power-enhancing) proposals (see Bach and Metzger (2019)). Therefore, it is imperative to empirically establish the validity of the random-assignment assumption.

Given that shareholder-sponsored proposals are not binding, intuition suggests that managers will only intervene in proposals that are more likely to be implemented. Thus, we disaggregate shareholder proposals in terms of likelihood of implementation and then examine the impact on CDS spreads through the RDD. In doing so, we borrow from the results in Ertimur et al. (2010). They document that the likelihood of implantation is higher for defense and voting proposals (labeled as shareholder right) as well as for the proposals that are sponsored by the unions. To show that our results are not driven by these proposals, we drop them from our sample and employ the RDD on a new sample that contains proposals that are less likely to be manipulated. Results are reported in Table A.10. In the first column, we drop 1,175 defense and shareholder right proposals from the 2,718 total proposals that were originally analyzed and reported in Table 2. Results for the remaining proposals shows a 9 basis points drop in adjusted CDS that is statistically significant at 5%. In the second column, we drop 899 proposals sponsored by the unions. CDS spreads for the remaining proposal drop by 6 basis points (significant at 1%). In the third column, we drop defense and voting proposals as well as proposals sponsored by the unions. The result shows a statistically significant drop in the CDS spreads of about 11 basis points. These results are consistent with our earlier finding in Table 2 and add to its credibility.

Table A.10
Vote Manipulation

	Cumulative Changes in Adjusted CDS Spread		
Proposals Dropped:	(1) Defense and Voting	(2) Sponsored by Unions	(3) Defense and Voting & Sponsored by Unions
Pass	-9.0710**	-6.1920***	-11.1250**
	(0.0400)	(0.0100)	(0.0500)
R^2	0.0264	0.0235	0.0338
Observations	1,543	2,117	1,110

This table presents regression results of the cumulative adjusted change in CDS spreads from the day of the meeting $t = 0$ to the next day $t = 1$ in response to passage of a governance proposal. Adjusted CDS spreads are calculated using a rating-adjusted method. The model specification is given in Equation (A1). Column 1 estimates are based on the whole sample (winsorized at 1% and 99%) after dropping defense and voting proposals. In Column 2 proposals sponsored by unions are dropped (winsorized at 1% and 99%). Column 3 further restricts the sample by dropping all defense and voting proposals as well as those sponsored by unions. All columns control for year fixed effects and the information contained in distance to majority threshold using a polynomial in the vote share of order 6, one on each side of the threshold. Standard errors are clustered by firm. *p*-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

I.G.4 CDS Sample Selection Bias

Another major concern with our analysis is the sample bias that may arise from considering only firms with traded CDS contracts. Subrahmanyam et al. (2014a) show that the inception of CDS trading is not random. *Ex-ante*, CDS trading may be more likely to be initiated for certain types of firms. *Ex-post*, the existence of CDS trading may distort real incentives of managers and/or impact the severity of the shareholder-bondholder conflict. The presence of CDS trading as an insurance contract ameliorates bondholder agency risk from shareholder opportunism, and therefore lowers the sensitivity of CDS spreads to changes in shareholder control, implying that our estimates likely understate the effect in the overall population. Subrahmanyam, Tang, and Wang (2014a; 2014b) show that CDS firms tend to be larger, safer, more profitable, with more working capital, and hold more cash. In this case also, our estimates likely understate the effect in the overall population. Nevertheless, we address this concern in two ways. First, we compare the distribution of our sample financial- and governance-related characteristics with those of public firms during the sample period. Second, and more formally, we address the selection bias by employing a Heckman (1979) type self-selection model (similar to Subramanyam et al. (2014a)) in conjunction with RDD design.

Table A.11 reports the comparison of our sample characteristics and those of the COMPUSTAT universe during the sample period. Consistent with Subramanyam et al. (2014a), we also find that the firms with traded CDS contracts in our sample are larger and have stronger balance sheets with relatively high credit quality. But the evidence is mixed with respect to their managerial entrenchment levels. Their managers have shorter tenures but are more likely to also be the chairman of the board. Furthermore, these firms have greater number of major antitakeover defenses in place, as measured by E-Index. Overall, it does not appear that the benefit of stronger shareholder control to bondholders are overstated in our results but may be understated.

Table A.11

Comparing the Distribution of the Sample Characteristics with Those of COMPUSTAT Universe

	Our Sample			All COMPUSTAT			
	Mean	Median	Obs.	Mean	Median	Obs.	Diff
Ln(Assets)	10.056	9.966	1,750	5.24	5.418	127,581	4.816***
Cash/Assets	0.101	0.065	1,750	0.195	0.086	127,558	-0.094***
EBIT/Assets	0.085	0.077	1,749	-1.472	0.029	125,860	1.557***
Sales/Assets	0.824	0.661	1,750	1.061	0.583	126,796	-0.237**
PPENT/Assets	0.308	0.256	1,686	0.256	0.146	124,599	0.052***
Leverage Ratio	0.234	0.171	1,745	0.209	0.11	113,630	0.025***
Rated	0.986	1.000	1,750	0.214	0.000	128,165	0.772***
RE/Assets	0.209	0.192	1,747	-29.083	-0.004	124,061	29.292***
CAPX/Assets	0.043	0.035	1,720	0.064	0.028	120,922	-0.021***
Tenure	5.464	4.000	1,709	7.527	5.000	37,725	-2.063***
Duality	0.838	1.000	1,479	0.674	1.000	19,709	0.164***
E-Index	3.250	3.000	1,141	3.089	3.000	28,304	0.161***

To formally address the effects of selection bias caused by CDS trading, we use Heckman's selection model. Heckman's selection model improves our estimation results for the effect of being selected for CDS trading. Subrahmanyam et al. (2014a) find that CDS contracts are more likely to be traded for firms with high credit quality and visibility (size). Therefore, our revised empirical model consists of two equations: the main RDD equation, which is the same as equation (A2),

$$y_{ft} = \theta D_{ft} + P_r(\nu_{ft}, \gamma^r) + P_l(\nu_{ft}, \gamma^l) + u_{ft}. \tag{A2}$$

and a selection equation that describes the characteristics of the firms for which CDS spread, y_{ft}, is observable, i.e., firms that have active CDS trading:

$$Active\ CDS_{ft} = \gamma Z_{ft} + v_{ft}. \tag{A7}$$

with $$corr(u_{ft}, v_{ft}) = \rho$$

where Z_{ft} is the firm characteristics for credit quality (i.e., Cash/Assets, EBIT/Assets, Sales/Assets, PPENT/Assets, Leverage, RE/Assets standing for retained earnings to total assets ratio, CAPX/Assets, and Rated standing for having a bond rating or not) and visibility (Ln(Assets)) that Subrahmanyam et al. (2014a) found to be significant determinants of having a CDS contract or not. If $\rho \neq 0$ the standard OLS estimations for the single RDD equation will be biased. Using Heckman's maximum likelihood estimation procedure to combine the RDD and the selection equation provides consistent and efficient estimates. Finally, we test for $\rho = 0$ to assess the extent to which our original RDD estimates (single equation) are biased because of the endogeneity between the error terms for the two equations.

Table A.12 shows the estimation results. The estimation results for the RDD model and the selection model are reported in the upper and lower panels, respectively. Columns 1 and 3 report the original OLS model in which selection is ignored, whereas Columns 2 and 4 use Heckman's model and take the selection issue into consideration. Comparing Columns 1 to 2 or 3 to 4 shows that estimation results for the RDD model and for the combination of the RDD and Heckman selection model are very similar and consistent with our earlier main findings. This is reassuring that our original RDD estimates are not biased. Moreover, the results of the endogeneity test show that the correlation coefficient, ρ, does not reject the null hypothesis that $\rho = 0$ with *p*-values of .315 and .137 for models in Columns 2 and 4, respectively. Overall, this exercise confirms that sample selection does not seem to generate any bias in our estimates.

Table A.12

Robustness Check: Sample Selection bias

	Cumulative Changes in Adjusted CDS Spread			
RDD Equation	(1)	(2)	(3)	(4)
Pass	-6.087***	-5.970***	-5.559**	-5.413**
	(0.006)	(0.005)	(0.011)	(0.012)
Selection Equation				
Ln(Assets)		0.416***		0.443***
		(0.000)		(0.000)
Cash/Assets		0.539**		0.476*
		(0.047)		(0.090)
EBIT/Assets		0.021***		0.490***
		(0.000)		(0.010)
Sales/Assets		0.006***		0.151***
		(0.000)		(0.000)
PPENT/Assets		0.546***		1.028***
		(0.000)		(0.000)
Leverage		-1.074***		-0.933***
		(0.000)		(0.000)
Rated		1.369***		1.344***
		(0.000)		(0.000)
RE/Assets				0.054***
				(0.000)
CAPX/Assets				-4.171***
				(0.000)
Censored obs.		106,773		100,688
Uncensored obs.	2,611	2,611	2,557	2,557
Total obs.	2,611	109,384	2,557	103,245
Endogeneity test				
Rho		0.068		0.092
p-value (Rho = 0)		0.315		0.137

This table presents regression results of the cumulative adjusted change in CDS spreads from the day of the meeting $t = 0$ to the next day $t = 1$ in response to passage of a governance proposal. Adjusted CDS spreads are calculated using a rating-adjusted method. The model specification for Columns 1 and 3 are given in Equation (A1) and for Column 2 and 4 in Equation (A7) in which sample selection is taken into account using Heckman procedure. The upper panel presents the estimation results for the main equation, whereas the lower panel present the estimation result for the selection model. All columns use the full sample (winsorized at 1% and 99%). All columns control for year fixed effects and the information contained in distance to threshold by using a polynomial in the vote share of order 6, one on each side of the threshold. Standard errors are clustered by firm. *p*-values are reported in parentheses, and significance at the 10%, 5%, and 1% levels are indicated by *, **, and ***, respectively.

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